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Web of Science h-Index: 22
Google Scholar Citation h-Index: 26



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EDUCATION

PhD (Entomology). Double Minors in Forestry & Statistics 1996-2001
Department of Entomology. University of Wisconsin. Madison, Wisconsin (USA)
Advisor: Kenneth F Raffa

MSc (Forestry) 1994-1996
College of Forestry. Stephen F Austin State University. Nacogdoches, Texas (USA)
Advisor: David L Kulhavy

BSc (Forestry) 1987-1991
College of Forestry. Istanbul University. Istanbul (Turkey)

RESEARCH & PROFESSIONAL EXPERIENCE

Professor in Forest Entomology & Chemical Ecology July 2017-Current
Department of Renewable Resources. University of Alberta.

Canada Research Chair (Tier II) in Forest Entomology Sept 2007-Aug 2017
Department of Renewable Resources. University of Alberta.

Associate Professor July 2013-June 2017
Department of Renewable Resources. University of Alberta.

Assistant Professor Sept 2007-June 2013
Department of Renewable Resources. University of Alberta.

Associate Research Specialist May 2005-Aug 2007
Department of Environmental Sciences, Policy & Management. College of Natural Resources. University of California. Berkeley, California. Supervisor: David L Wood

Postdoctoral Research Associate Sept 2001- April 2005
Department of Environmental Sciences, Policy & Management. College of Natural Resources. University of California. Berkeley, California. Supervisors: Donald L Dahlsten (2001-2002) & David L Wood (2002-2005).

Research Assistant Sept 1996-Aug 2001

Department of Entomology. University of Wisconsin. Madison, Wisconsin.

- Temporal and spatial interactions among root and stem insects, associated fungi and predators in declining red pine forests in Wisconsin
- Determine habitat characteristics of the endangered Karner Blue Butterflies in Wisconsin.

Research Assistant

Sept 1994-Aug 1996

College of Forestry, Stephen F Austin State University. Nacogdoches, Texas.

- Effects of forest disturbances on survival of endangered Red-cockaded Woodpecker in the southern coniferous forests

Research Entomologist

July 1991- Aug 1994

Ministry of Agriculture & Forestry. Turkey.

- Improving control techniques against root insects of *Pinus sylvestris* seedlings in *P. sylvestris* forests.

Undergraduate Senior Thesis

Sept 1987-June 1991

College of Forestry. Istanbul University. Istanbul, Turkey

- Evaluating the effect of forest stand density on abundance of root colonizing weevils in *Pinus sylvestris* forests

CURRENT PROJECTS AT THE UNIVERSITY OF ALBERTA

1. Invasion dynamics of the mountain pine beetle in the novel pine forests in western Canada.

(2007-Current). Funded by NSERC–Discovery, Genome Canada, Genome Alberta, Forest Industry, Alberta Innovates-BioSolutions.

- a) Investigating the anatomical and chemical defenses of lodgepole pine and white spruce against mountain pine beetle and spruce budworm respectively. *Postdoctoral Research Fellow: Jen Klutsch.*
- b) Role of soil resource gradients on susceptibility of jack pine trees to mountain pine beetle colonization. *PhD student: Altaf Hussain.*
- c) Effects of host tree nutrients on mountain pine beetle-symbiotic fungi interactions. *MSc student: Sydne Giselle Guevara.*
- d) Effects of beetle-associated fungi on interactions between two competing bark beetle species, mountain pine beetle and pine engraver beetles on jack pine. *MSc student: Fuai Wang.*
- e) Characterizing the effects of genotype on the phloem resin duct characteristics of lodgepole pine and white spruce as part of the RESFOR project. *Undergraduate student: Chen Xin Kee*

2. Effects of biotic and abiotic disturbances on soil microbial communities in conifer forests in western Canada.

a) Using the functional traits of soil fungi to improve post-disturbance pine regeneration. *Funded by NSERC–Strategic Partnership Program, NSERC–Discovery, fRI Research–Mountain Pine Beetle Ecology Program, ACA Grants in Biodiversity.*

- Abiotic gradients and the response of root-inhabiting fungi to pine mortality. *Postdoctoral Research Fellow: Jonathan Cale.*
- Soil fungal community response to and recovery from forest disturbances. *PhD student: Jean Rodriguez Ramos.* Co-supervised with J Karst (Depart Renewable Resources).
- Fungal communities as drivers of tree insect and disease resistance. *PhD student: Evan Fellrath.* Co-supervised with J Karst (Depart Renewable Resources).

- Fungal community control of tree mineral acquisition and carbon allocation. *MSc student: Jackson Beck*. Co-supervised with S Simard at the U of British Columbia.
- b) Beyond beetle: natural and facilitated lodgepole pine regeneration after mountain pine beetle outbreaks in Alberta. (2014-2018). *Funded by fRI Research–Mountain Pine Beetle Ecology Program, Alberta Agriculture and Forestry, Alberta Innovates–BioSolutions*. *PhD student: Shiyang (Violet) Zhao*
- c) Development of monitoring tools to detect mountain pine beetle at low densities on the eastern and northern edge of beetle expansion into Saskatchewan and NW Territories. (2014-2017). *Funded by fRI Research–Mountain Pine Beetle Ecology Program, SERG-International*. *Undergraduate student: Gail Classens*.

Other projects focusing on insect-plan-pathogen interactions

1. Role of the chemical responses of aspen to competition and herbivory. (2015-2018). *Funded by NSERC–Discovery to Erbilgin and J Cahill (Depart Biological Sciences)*. *PhD student: Margarete Dettlaff*. Co-supervised with Dr. JC Cahill at the U of A.
2. Effects of Scots pine (*Pinus sylvestris*) on reproduction of and pheromone production by mountain pine beetle. (2017-2018). *Funded by The Swedish Research Council Formas–Grants for Research and Development Projects*. *MSc Student: Hafsa Najeeb*.
3. *Uncovering the natural physiological variation driving lodgepole pine resistance to western gall rust (2018-2021)*. *Funded by Alberta Innovates–BioSolutions*. My personal project.

COMPLETED PROJECTS AT THE UNIVERSITY OF ALBERTA

1. **Roles of native insects and diseases in invasion of jack pine forests: Implications to the host and range expansion of the mountain pine beetle in the Canadian boreal forests.** (2010-2013). *Funded by Canada Research Chair Program, Alberta Innovation–New Faculty Award Program, NSERC–Discovery, NSERC-Strategic Partnership Program*
 - a) Jack pine-mediated interaction between dwarf mistletoe and mountain pine beetle in the invasion biology of mountain pine beetle in the boreal jack pine forests. *PhD student: Jennifer Klutsch*. Graduated in 2017.
 - b) Characterizing the leaf resin duct characteristics of whitebark pine occurring at different elevations. *Undergraduate student: Marla Roth*. Project was completed in 2018.
 - c) Characterizing the changes in logepole pine bark chemistry after successful mountain pine beetle attacks. *Undergraduate student: Marla Roth*. Project was completed in 2017.
 - d) Effects of host tree nutrients on development of mountain pine beetle larvae. *Undergraduate student: Gail Classens*. Project was completed in 2017.
 - e) How variation in lipid content among different tree species affects performance and pheromone production of mountain pine beetle. *MSc student: Guncha Ishangulyyeva*. Graduated in 2015.
 - f) Geographical variation in jack pine (*Pinus banksiana*) chemistry and its effect on mountain pine beetle (*Dendroctonus ponderosae*) pheromone production and host tree aggregation. *MSc student: Spencer Taft*. Graduated in 2015.
 - g) Do chemical changes in response to inoculations with *Grosmannia clavigera* explain plant suitability as a host to the mountain pine beetle? *Undergraduate student project: Marlena Muskens*. Project was completed in 2013.
 - h) Inter-plant communication: assessing the role of volatile metabolites from defoliated jack pine trees on altering susceptibility of neighboring healthy conspecifics. *MSc student: Jenny Lazebnik*. Graduated in 2012.

- i) Jack pine-mediated interaction between jack pine budworm and mountain pine beetle in the invasion biology of mountain pine beetle in the boreal jack pine forests. *MSc student: Jessie Colgan*. Graduated in 2010.
2. **Exploring resistance mechanisms in the *S. musiva* - *Populus* interaction.** *Col. J LeBoldus (Depart Botany & Plant Path, Oregon State U., Corvallis, Oregon). (2011-2017). Funded by NSERC-Engage, NSERC-Collaborative Research and Development Programs, Alberta-Pacific Forestry Industries. PhD student: Ahmed Najar. Co-supervised with B Thomas. Graduated in 2017.*
 3. **Identifying functional roles of most abundant ectomycorrhizal fungi in establishment and growth of Lodgepole pine genotypes in Alberta.** *(2014-2017). Funded by NSERC-Discovery. MSc student: Sanat Kanekar. Graduated in 2017.*
 4. **Ecology and phenology of a resident Aphelinid wasp (*Coccophagus* sp.) and evaluation of its potential as a biocontrol agent of European elm scale (*Eriococcus spurius*).** *(2015-2017). Funded by the City of Calgary. MSc student: Caitlin Mader. Graduated in 2017.*
 5. **Changes in soil microbial community and organic volatile emission in response to disturbances.** *(2017). Undergraduate student: Christien Dykstra and Brosnon Peters. Project was completed in 2017.*
 6. **Does prescribed fire affect population dynamics of mountain pine beetle? Evaluating population success and fitness of the beetle on fire-injured lodgepole pine trees in Alberta.** *(2010-2015). Col: Alberta Agriculture and Forestry and Parks Canada. Funded by fRI Research–Mountain Pine Beetle Ecology Program. PhD student: Crisia Tabacaru. Graduated in 2015.*
 7. **Pine regeneration following mountain pine beetle attack: facilitation by mycorrhizal fungi.** *(2010-2013). Col. J Cahill (Depart Bio Sci, Univ Alberta), S Simard (Depart Forest Sci, Univ British Colum), N Erbilgin, J Cooke (Depart Bio Sci, Univ Alberta) (2011-2013). Funded by NSERC-Strategic Program. MSc Student: Paul Cigan. Co-supervised with Dr. J Cahill at the U of A. Graduated in 2013.*
 8. **How do interactions among microbial symbionts affect the host and range expansions of mountain pine beetle?** *Col: KF Raffa (Depart Entomol) & C Currie (Depart Bacteriol) (Univ Wisconsin, Madison), BH Aukema (Depart Entomol, Univ Minnesota) (2008-2011). Funded by USDA – AFRI. MSc student: Janet Ariss. Graduated in 2012.*
 9. **Mountain pine beetle system genomics (Tria Project): Role of drought in mediating interactions between different host trees and the mountain pine beetle.** *Col: M Evenden (Depart Bio Sci, Univ Alberta) (2008-Current). Funded by Genome Alberta and Genome Canada. Postdoctoral fellow: Inka Lusebrink.*
 10. **Fertilization and thinning as means of increasing the vigour of lodgepole pine trees against mountain pine beetle attacks.** *Col: V Lieffers (Depart Ren Res, Univ Alberta) (2008-2012). Funded by Forest Industry. PhD student: Devin Goodsman. Graduated in 2012.*
 11. **Role of plant growth and biomass in tolerance and resistance of aspen for forest tent caterpillar in western Canada.** *Col: S Landhausser (Depart Ren Res, Univ Alberta) (2009-2011). Funded by Oil & Gas Industry & NSERC-Discovery Program. MSc student: Ahmed Najar. Graduated in 2012. Co-supervised with D. S Landhausser at the U of A. Graduated in 2012.*
 12. **Implementation of national recovery strategies for the Mormon metalmark butterfly.** *Col. JR Spence (Depart Ren Res), S Pruss (Parks Canada, Calgary) (2009-2013). Funded by Parks Canada. MSc student: Ashley Wick. Co-supervised with Dr. J Spence at the U of A. Graduated in 2012.*
 13. **Determine the role of native bark and ambrosia beetles in mortality of oak trees infected with sudden oak death pathogen in California.** *Col: P Bonello (Depart Plant Path, Ohio S Univ) (2004-2011). Continuation of my postdoctoral work at the University of California.*

14. **Determining the role of bark beetles associated with exotic pitch canker pathogen in transmitting the pathogen to Monterey pines.** *Col: TR Gordon (Depart Plant Path, Univ California, Davis) (2005-2015).* Continuation of my postdoctoral work at the University of California.
15. **Evaluating new techniques for application of antiaggregation pheromones for protection of pine trees from bark beetle attacks in the western USA.** *Col: NE Gillette (USDA-Forest Service, Berkeley, California) and DL Wood (Univ California, Berkeley) (2004-2015).* Continuation of my postdoctoral work at the University of California.
16. **Understanding the role of induced tree defenses in behavior and ecology of bark beetles.** *Col: P Krokene (Norwegian For & Lands Inst Norway), A-K Borg-Karlson (Depart Chem, Royal Institute of Technology, Stockholm, Sweden) (2008-2016).* Funded by Norwegian Forest & Lands Institute and The Swedish Research Council Formas (Grants for Research and Development Projects - Young Researchers Program). PhD student: Tao Zhang, graduated in 2011. Post-doc: Tao Zhang.

TEACHING EXPERIENCE

Current

1. **Disturbance Ecology (RENR 440/732) (Fall Term) (Fall 2008-Current).** The objective of this course is to present a broad array of topics related to the natural and anthropogenic disturbances occurring in both natural (aquatic or terrestrial), and altered/managed (agricultural fields, agroforestry, or oilsands) ecosystems. Students analyze and discuss disturbances occurring in these environments and evaluate their impacts on the spatial and temporal patterns of ecosystems across landscape. They examine the parallels and differences between natural and anthropogenic disturbances to better understand the contributions of humans to present disturbance regimes. Students are active participants in the lectures and discussions, providing their thoughts and opinions throughout the semester.
2. **Forest Health (RENR 447/747) (Winter Term) (Winter 2014-Current).** The overall objectives of this course are to introduce students to major forest insects and diseases and their impacts on forests. The focus is largely insects and fungal diseases occurring in western Canada but it also looks at forest health issues of national and international importance. Students learn the biology and ecology of forest insects and diseases while also evaluating forest management strategies including prevention and control. Basic entomology (classification, structure and function), biology and damage of main forest pests, and approaches to insect pest management is also covered. The major classes of tree diseases is covered, with emphasis on principles of plant pathology, disease cycles, disease symptoms/signs, ecological services, and disease management.

Past

1. **Environmental Assessment Principles and Methods (ENCS 307).** Environmental assessments are becoming more common as increasing regulatory requirements are developed. Information collected for environmental assessments must have the potential to pass legal, legislative or regulatory, statistical and scientific scrutiny. Knowing what to assess and how to assess it will meet these objectives with efficiency and cost effectiveness. The course is focused on principles and elements of environmental assessments as they pertain to terrestrial investigations. Types of assessments, reasons for conducting them, information required, how that information should be collected, analyzed and ultimately communicated will be discussed. I taught this course from 2010 to 2012.
2. **Plant-Animal Interactions (BIOL 433).** Plants and animals have a long co-evolutionary history, and this course explores many of the ways in which plants and animals use and abuse each other. Specific topics include pollination biology, herbivory, and dispersal. Emphasis is on both the evolutionary ecology and ecological implications of these interactions. The overall objective of BIOL 433 is to present a broad array of topics in plant-animal interactions, with an emphasis on current and emerging areas of research. Students

will be active participants in the lectures and seminars, providing their thoughts and opinions throughout the course. Through this process, it is anticipated that students will arrive at the realization that the ecology and evolution of plants and animals are intimately intertwined. Students are expected to draw upon their knowledge from previous ecology course(s). I was invited to co-teach this course with the two other instructors from Biological Sciences Department (David Hik and Justine Karst) in Winter 2011. Each instructor had equal share of responsibility.

TEACHING RELATED ACTIVITIES

2018

1. **BIOL 499 (Research Topic).** Undergraduate student *Gail Classens* conducted a research experiment under my supervision during Fall 2017 and Winter 2018 semesters. She submitted a report as part of her course requirement. It took about 8 months.
2. **RENR 402 (Special Topics).** Undergraduate student *Chen Xin Kee* took Special Topics from me during Fall 2017 and Winter 2018 semesters. We met biweekly to discuss her subject of interest.
3. **Guest Lecturer.** Plant-Animal Interaction (BIO 433). Department of Biological Sciences. University of Alberta.

2017

4. **BIOL 499 (Research Topic).** Undergraduate student *Gail Classens* conducted a research experiment under my supervision during Fall 2017 and Winter 2018 semesters. She submitted a report as part of her course requirement. It took about 8 months.
5. **RENR 402 (Special Topics).** Undergraduate student *Chen Xin Kee* took Special Topics from me during Fall 2017 and Winter 2018 semesters. We met biweekly to discuss her subject of interest.
6. **RENR 402 (Special Topics).** Undergraduate student *Marla Roth* took Special Topics from me during Winter Semester. We met biweekly to discuss her subject of interest.
7. **RENR 501 (Special Topics).** One of my graduate students, *Hafsa Najeeb*, took Special Topics from me during Winter Semester. We met biweekly to discuss her subject of interest.
8. **Guest Lecturer.** Plant-Animal Interaction (BIO 433). Department of Biological Sciences. University of Alberta.
9. **Guest Lecturer.** Graduate Research Skills (RENR 603). Department of Renewable Resources. University of Alberta.

2016

10. **RENR 501 (Special Topics).** One of my graduate students, *Fuai Wang*, took Special Topics from me during Fall Semester. We met biweekly to discuss her subject of interest.
11. **RENR 501 (Special Topics).** One of my graduate students, *Jackson Beck*, took Special Topics from me during Fall Semester. We met biweekly to discuss his subject of interest.
12. **RENR 501 (Special Topics).** One of my graduate students, *Sydne Giselle Guevara*, took Special Topics from me during Fall Semester. We met biweekly to discuss her subject of interest.
13. **RENR 501 (Special Topics).** One of my graduate students, *Jean Rodriguez Ramos*, took Special Topics from me during Winter Semester. We met biweekly to discuss his subject of interest.
14. **BIOL 399 (Research Topic).** Undergraduate student *Gail Classens* conducted a research experiment under my supervision and submitted a report as part of her course requirement. It took about 8 months.
15. **Guest Lecturer.** Graduate Research Skills (RENR 603). Department of Renewable Resources. University of Alberta.

2015

16. **Guest Lecturer.** Plant-Animal Interaction (BIO 433). Department of Biological Sciences. University of Alberta.
17. **Guest Lecturer.** Graduate Research Skills (RENR 603). Department of Renewable Resources. University of Alberta.

2014

18. **Guest Lecturer.** Chemical Ecology/Advanced Chemical Ecology (BIOL 434/534). Department of Biological Sciences. University of Alberta.
19. **Guest Lecturer.** Graduate Research Skills (RENR 603). Department of Renewable Resources. University of Alberta.

2013

20. **Guest Lecturer.** Forest Entomology (ENT 380). Department of Renewable Resources. University of Alberta.
21. **Guest Lecturer.** Plant-Animal Interaction (BIO 433). Department of Biological Sciences. University of Alberta.
22. **RENR 501 (Special Topics).** One of my graduate students, *Spencer Taft*, took Special Topics from me during winter semester. We met biweekly to discuss his subject of interest.
23. **RENR 501 (Special Topics).** One of my graduate students, *Guncha Ishangulyyeva*, took Special Topics from me during winter semester. We met biweekly to discuss her subject of interest.
24. **BIOL 498.** Undergraduate student *Marlena Muskens* conducted a research experiment under my supervision and submitted a report as part of her course requirement. It took about 8 months.

2012

25. **Guest Lecturer.** Plant Ecology (BOT 332). Department of Biological Sciences. University of Alberta.
26. **Guest Lecturer.** Chemical Ecology/Advanced Chemical Ecology (BIOL 434/534). Department of Biological Sciences. University of Alberta.
27. **Guest Lecturer.** Forest Entomology (ENT 380). Department of Renewable Resources. University of Alberta.

2011

28. **Guest Lecturer.** Forest Entomology (ENT 380). Department of Renewable Resources. University of Alberta.
29. **RENR 501 (Special Topics).** One of my graduate students, *Jenny Lazebnik*, took Special Topics from me during fall semester in 2011. We met biweekly to discuss their subject of interest.

2010

30. **RENR 501 (Special Topics).** Two of my graduate students, *Ahmed Najjar* and *Jenny Lazebnik*, took Special Topics from me during fall semester in 2010. We met biweekly to discuss their subject of interest.
31. **FOR 535 (Problems in Forest Resources Management).** *Wendy Crosina*, an MSc student in the Department of Renewable Resources, conducted an independent research project with me on the effects of the mountain pine beetle on caribou population in Alberta.
32. **RENR 501 (Special Topics).** *Jessie Colgan* (my MSc student) took special topics from me during winter semester in 2010. She wrote and submitted a synthesis paper as a part of the class requirement. She and I submitted her paper as a peer-reviewed manuscript to the Forestry Chronicle in March of 2010. The paper was published in 2010.

33. **Guest Lecturer.** Forest Entomology (ENT 380). Department of Renewable Resources. University of Alberta.
34. **Guest Lecturer.** Forest Entomology and Pathology (FEB 200). Department of Biology and Environment. Norwegian University of Life Sciences. Ås, Norway.

2009

35. **Guest Lecturer.** RenR 603 Seminar. Department of Renewable Resources. University of Alberta.
36. **Guest Lecturer.** Forest Entomology and Pathology (FEB 200). Department of Biology and Environment. Norwegian University of Life Sciences. Ås, Norway.
37. **Guest Lecturer.** Forest Entomology (ENT 380). Department of Renewable Resources. University of Alberta.
38. **Guest Lecturer.** Plant-Animal Interaction (BIO 433). Department of Biological Sciences. University of Alberta.

2008

39. **Guest Lecturer.** RenR 603 Seminar. Department of Renewable Resources. University of Alberta.
40. **Guest Lecturer.** Forest Entomology and Pathology (FEB 200). Department of Biology and Environment. Norwegian University of Life Sciences. Ås, Norway.
41. **Guest Lecturer.** Forest Entomology (ENT 380). Department of Renewable Resources. University of Alberta.

2002-2007

42. **Discussion Leader.** Freshman (ESPM 24) and Senior (ESPM 194) Seminars. Univ California, Berkeley.
43. **Guest Lecturer.** General Entomology (ESPM 140). Univ California, Berkeley
44. **Guest Lecturer.** Fire, Insects, and Diseases in Wildland Ecosystems (ESPM 134). Univ California, Berkeley.
45. **Mentored Young Scholars.** Kyle Apigian (2001- 2005), Diana Simon (2001-2002), Gabriella Ritok (2002-2004), Kristina Bischel (2004-2005), Mike O'Brien (2004-2005), Andrew Nelson (2005-Current) (Univ California, Berkeley).

GRANTS & AWARDS

Grants awarded at the University of Alberta

2018

1. **Alberta Innovates-BioSolutions.** "Uncovering the natural physiological variation driving lodgepole pine resistance to western gall rust". *PI: N Erbilgin.* Amount received: \$90,000 (2018-2021).
2. **Alberta Conservation Association Grants in Biodiversity.** "Impact of disturbance altered soil microbial communities on lodgepole pine seedling performance and carbon allocation?" *PI: N Erbilgin.* Amount received \$8,165 for two years (2018-2019). This is a biodiversity grant intended to support one of my MSc students (Jackson Beck) research project.
3. **Alberta Conservation Association Grants in Biodiversity.** "Are lodgepole pine trees at higher elevations and latitudes more susceptible to attack by range-expanding mountain pine beetle?" *PI: N Erbilgin.* Amount received \$11,410 for two years (2018-2019). This is a biodiversity grant intended to support one of my MSc students (Melanie de Kappelle) research project.

2017

4. **fRI Research–Mountain Pine Beetle Ecology Program.** “Improving monitoring tools to detect mountain pine beetle at low and high densities in novel habitats”. *PI: N Erbilgin.* Amount received: \$73,700 (2018-2019).
5. **Swedish University of Agricultural Sciences – Faculty of Forest Sciences Travel Grant.** *PI: Nadir Erbilgin.* Amount received \$5,000.
6. **Alberta Conservation Association Grants in Biodiversity.** “Can ectomycorrhizal fungi prevent lodgepole pine starvation during droughts by becoming its carbon source?” *PI: N Erbilgin.* Amount received \$17,440 for two years (2017-2019). This is a biodiversity grant intended to support one of my MSc students (Jean Carlos Rodriguez Ramos) research project.

2016

7. **Genome Canada Large-Scale Applied Research Project Competition.** “Resilient forests (RES-FOR): Climate, pests & policy-Genomic Applications”. *Lead-PI: B Thomas, Co-Lead: N Erbilgin, Y El-Kassaby. Ten Co-PIs.* Amount received: \$5,678,657 for 4 years (2016-2020). My program received \$537,455 (9.46% of total fund).
8. **The Swedish Research Council Formas–Grants for Research and Development Projects.** “Introduced tree species in Sweden – implications for insect pests and biodiversity” *Lead-PI: M Schroeder (SLU, Uppsala, Sweden). Co-PIs: T Ranius (SLU, Uppsala), E Hedenström (Mid Sweden Univ, Sunsvall, Sweden), N Erbilgin.* Amount received: \$6,900,000 Swedish Kroners (SEK) for five years (2016-2021). My program received about \$60,000.

2015

9. **NSERC–Strategic Partnership Grant.** “Using the functional traits of soil fungi to improve post-disturbance pine regeneration”. *PI: N Erbilgin. Co-PI: J Karst (Depart Ren Res, Univ Alberta), JC Cahill (Depart Bio Sci, Univ Alberta), S Simard (Depart For Sci, Univ British Columbia).* Amount received: \$483,511 for three years (2015-2018).
10. **NSERC–Discovery Grant Program.** “Role of plant secondary compounds in invasion biology of an insect herbivore in novel habitats” *PI: N Erbilgin.* Amount received: \$165,000 for five years (2015-2020).
11. **fRI Research–Mountain Pine Beetle Ecology Program.** “Development of monitoring tools to detect mountain pine beetle at low densities on the eastern and northern edge of beetle expansion into Saskatchewan and NW Territories”. Phase 2. *PI: N Erbilgin.* Amount received: \$136,620 (2015-2017).
12. **fRI Research–Mountain Pine Beetle Ecology Program.** “Rehabilitation of beetle-killed stands by improving their associations with mycorrhizal fungi”. *PI: J Karst, Co-PI: N Erbilgin.* (2016-2018).
13. **Alberta Conservation Association Grants in Biodiversity.** “Ecology and phenology of a resident Aphelinid wasp (*Coccophagus* sp.) and evaluation of its potential as a biocontrol agent of European Elm Scale (*Eriococcus spurius*)” *PI: N Erbilgin.* Amount received \$14,800 for two years (2015-2016). This is a biodiversity grant intended to support one of my MSc students (Caitlin Mader) research project.

2014

14. **Scientific and Technical Research Counsel of Turkey (TUBITAK).** “Investigating the underlying mechanisms of chemical resistance in *Pinus brutia* to pine processionary moth: role of constitutive and induced defense chemicals”. *PI: N Erbilgin.* Amount received: \$20,000 (2014).
15. **Alberta Conservation Association Grants in Biodiversity** “Alberta’s Achilles heel: an investigation of the features of susceptibility of Albertan balsam poplar to *Septoria musiva*” *PI: N Erbilgin.* Amount received \$20,000 for two years (2014-2015). This is a biodiversity grant intended to support one of my PhD students’ (Ahmed Najjar) research project.
16. **fRI Research–Mountain Pine Beetle Ecology Program & Alberta Innovates–Biosolutions.** “Beyond beetle: natural and facilitated lodgepole pine regeneration after mountain pine beetle outbreaks

in Alberta". *PI: Ellen Macdonald. Co-PI: Vic Lieffers, Mike Flannigan, Nadir Erbilgin.* Amount received: \$750,000 (2014-2018).

2013

17. **fRI Research–Mountain Pine Beetle Ecology Program.** "Development of monitoring tools to detect mountain pine beetle at low densities on the eastern and northern edge of beetle expansion into Saskatchewan and NW Territories". Phase 1. *PI: N Erbilgin.* Amount received: \$65,000 (2014).
18. **Forest Resource Improvement Association of Alberta - Mountain Pine Beetle Program.** "Innovative Stand Enhancement and Regeneration Systems to Rehabilitate Mountain Pine Beetle (MPB) Affected Stands on Boreal Sites North of Grande Prairie". *PI: Jim Stephenson (Canadian Forest Products Ltd.). Co-PI: Derek Sidders (Northern Forestry Centre, Edmonton), Vic Lieffers, Ellen Macdonald, Mike Flannigan, Nadir Erbilgin.* Amount received: \$3,043,000.00 (2014-2016).
19. **NSERC–Discovery Grant Program.** "Ecology of Invasive Forest Insects in the Boreal Forest: Role of Plant Resistance and Community Interactions" *PI: N Erbilgin.* Amount received: \$25,000/yr (2013-2014).
20. **Alberta Enterprise & Advanced Education Research Capacity Program.** Infrastructure to investigate emerging biological threats in Canadian boreal forest ecosystems and integration with chemical ecology. *PI: N Erbilgin.* Amount received: \$90,994 (2013-2014).
21. **NSERC–Strategic Network. "The NSERC TRIA Network: Turning Risk Into Action for the Mountain Pine Beetle Epidemic".** *PI: J Cooke (U of A) and N Erbilgin and 13 other Co-PIs.* Amount received: \$4,000,000 (\$3,000,000 from NSERC plus \$1,000,000 from industry co-funding) (2013-2018). My program gets about 8% of the funding to support one PhD and one MSc students (\$300,000 for five years).

2012

22. **Canada Research Chair (Tier II) Renewal in in Forest Entomology.** Awarded to **N Erbilgin.** The Canada Research Chair is a multi-billion dollar Canadian Government Program aimed at supporting outstanding researchers to help them advance in their careers among world-class colleagues and gain access to top graduate students and state-of-the-art research facilities. The program supports the establishment of more than 2,000 research chairs at Canadian universities. The University of Alberta holds 90 Canada Research Chairs valued at more than \$100 million. Amount received: \$500,000 for five years (2012-2017). My program gets 100% of total amount. Visit the following website for more info: <http://www.chairs-chaire.gc.ca/home-accueil-eng.aspx>
23. **Canada Foundation of Innovation–Leaders Opportunity Fund.** Funding for infrastructure associated with the Canada Research Chair. *PI: N Erbilgin.* Amount received: \$ 90,994 (2012-2014).
24. **Alberta Conservation Association Grants in Biodiversity** "Mountain pine beetle attacks to ectomycorrhizal-seedling feedbacks: Players and processes that govern regeneration in post-outbreak forests." *PI: N Erbilgin.* Amount received \$5,000 for two years (2012-2013). This is a biodiversity grant intended to support one of my MSc students' (Paul Cigan) research project.

2011

25. **NSERC–Collaborative Research and Development Grant Program.** "Exploring resistance mechanisms in the *S. musiva - Populus* interaction." *PI: N Erbilgin. Co-PI: Jared LeBoldus (U of North Dakota).* Amount received: \$70,000 for three years (2011-2014).
26. **Alberta-Pacific Forest Industries Inc.** "Exploring resistance mechanisms in the *S. musiva - Populus* interaction." *PI: N Erbilgin. Co-PI: Jared LeBoldus (U of North Dakota).* Amount received: \$55,000 for three years (2011-2014).
27. **Alberta Conservation Association Grants in Biodiversity** "Playing with fire: The effect of prescribed burns on mountain pine beetle populations." *PI: N Erbilgin.* Amount received \$13,520 for two years

(2011-2012). This is a biodiversity grant intended to support one of my PhD students' (Crisia Tabacaru) research project.

28. **The Swedish Research Council Formas—Grants for Research and Development Projects—Young Researchers Program.** "Conifer defense mechanisms and pheromone biosynthesis in a tree-killing bark beetle". *PI: T Zhao. Co-PIs: A-K Borg-Karlsson, P Krokene, CG Fossdal, G Swedjemark, N Erbilgin.* Amount received: 2,920,000 Swedish Kronas (\$440,000 CAD). Since the work will be conducted in Sweden and Norway, I only got a travel grant from the project in the amount of \$10,000 CAD.

2010

29. **NSERC—Engage Grant Program.** "The epidemiology of *Septoria* canker in stoolbeds." *PI: N Erbilgin.* Amount received: \$21,250 for 6 months (2010).
30. **NSERC—Strategic Project Grants.** "Pine regeneration following mountain pine beetle attack: facilitation by mycorrhizal fungi." *PI: J Cahill (Depart Bio Sci, Univ Alberta). Co-PI: S Simard (Depart For Sci, Univ British Columbia), N Erbilgin, J Cooke (Depart Bio Sci, Univ Alberta).* Amount received: \$432,000 for three years (2011-2013). Since the complexity and structure of the project, there is no specific funding allocation for any single PI.

2009

31. **fRI Research—Mountain Pine Beetle Ecology Program.** "Does prescribed fire affect population dynamics of mountain pine beetle? Evaluating population success and fitness on fire-injured trees." *PI: N Erbilgin.* Amount received: \$150,000 for three years (2010-2012).
32. **Alberta Innovation—New Faculty Award.** "Interactions of two outbreak insect species in jack pine forest: implications to the host and range expansion of the mountain pine beetle in the boreal forests of Canada." *PI: N Erbilgin.* Amount received: \$299,790 for three years (2010-2013).
33. **Parks Canada—Cooperative Agreement.** "Implementation of selected objectives of the Mormon metalmark butterfly (*Apodemia mormo*) national recovery strategy." *PI: N Erbilgin & JR Spence (Depart Ren Res, Univ Alberta).* Amount received: \$120,000 for three years (2009-2012).
34. **Genome Canada—Applied Genomic Research in Bioproducts.** "Genomics-enhanced forecasting tools to secure Canada's near-term lignocellulosic feedstock supply for bioenergy using the mountain pine beetle-*Pinus* spp. system." *Leading PIs: J Bohlman (Depart For Sci, Univ British Columbia) & J Cooke (Depart Bio Sci, Univ Alberta). Co-PIs: N Erbilgin and 11 others.* Amount received: \$8,000,000 for three years (2009-2012). My program gets about 8% of total amount.

2008

35. **NSERC—Discovery Grant Program.** "Ecology and management of emerging forest pest complexes." *PI: N Erbilgin.* Amount received: \$90,000 for five years (2008-2012).
36. **US—Department of Agriculture - National Institute of Food and Agriculture - Agriculture and Food Research Initiative.** "How do interactions among microbial symbionts affect the host and range expansions of an eruptive forest insect?" *PI: KF Raffa (Depart Entomol) & C Currie (Depart Bacteriol) (Univ Wisconsin, Madison). Co-PI: N Erbilgin, BH Aukema (Depart Entomol, Univ Minnesota).* Amount received: \$449,950 for three years. My program got \$100,000 for three years (2008-2011).
37. **Alberta Crop Industry Development Fund.** "Optimization of a semiochemical-based attracticide to attract and kill female ash leaf cone rollers." *PI: M Evenden (Dept Bio Sci, Univ Alberta). Co-PIs: G Gries (Dept Bio Sci, Simon Fraser Univ), N Erbilgin, M Jenkins & M Wartenbe (City of Edmonton).* Amount received: \$26,883 for two years.

2007

38. **Canada Research Chair (Tier II) in Forest Entomology.** Awarded to **N Erbilgin.** The Canada Research Chair is a multi-billion dollar Canadian Government Program aimed at supporting outstanding

researchers to help them advance in their careers among world-class colleagues and gain access to top graduate students and state-of-the-art research facilities. The program supports the establishment of more than 2,000 research chairs at Canadian universities. The University of Alberta holds 117 Canada Research Chairs valued at more than \$100 million. Amount received: \$500,000 for five years (2007-2012). My program gets 100% of total amount.

39. **Canada Foundation of Innovation—Leaders Opportunity Fund.** Funding for infrastructure associated with the Canada Research Chair. *PI: N Erbilgin.* Amount received: \$96,854 (2007-2009). My program gets 100% of total amount.

Grants awarded as a post-doctoral research at the University of California, Berkeley from 2001-2007

1. **Minister for Agriculture, Food and Fisheries (Australia).** "Biological control of Monterey pine aphid in Australia." \$22,224/yr (2006-2007). *PI: DL Wood & N Erbilgin (Univ California, Berkeley).*
2. **USDA-FS/FHTET.** "Evaluating potential lures to monitor presence of *Sirex noctilio* in the USA." \$55,000 (2006-2007). *PI: DL Wood & N Erbilgin (Univ California, Berkeley).*
3. **USDA-CSREES/Univ California: Exotic/Invasive Pests & Diseases Res Program.** "New relationships among the sudden oak death pathogen, native bark and ambrosia beetles, and decay fungi colonizing North American oaks." \$144,973 (2004-2007). *PI: DL Wood & N Erbilgin (Univ California, Berkeley). Co-PI: P Bonello (Depart Plant Path, Ohio State Univ).*
4. **USDA-CSREES/Univ California: Exotic/Invasive Pests & Diseases Res Program.** "Evaluation of vector potential for five beetle species that carry the pitch canker pathogen." \$155,704 (2005-2008). *PI: DL Wood & N Erbilgin (Univ California, Berkeley) & TR Gordon (Depart Plant Path, Univ California, Davis).*
5. **USDA-Forest Service.** "Evaluating new techniques for application of antiaggregation pheromones for protecting pine trees from bark beetle attacks in Western US." \$260,000 (2004-2008). *PI: DL Wood & N Erbilgin (Univ California, Berkeley).*
6. **Pebble Beach & Del Monte Forest Corporation.** "Monterey pine regeneration and resistance to the pitch canker pathogen." \$10,000/yr (2003-2007). *PIs: DL Wood & N Erbilgin (Univ California, Berkeley).*
7. **Norwegian Forest and Landscape Institute.** "Spatiotemporal dynamics of introduced bark beetles: implications to resource competition, invasion risk and management." \$400,000.00. (2005-2008). *PI: B Økland (Norwegian For & Landscape Inst, Ås, Norway). Co-PI: N Erbilgin, O Skarpaas & N Christian Stenseth (Univ Oslo, Oslo, Norway).*

Student awards

- | | |
|--|-----------|
| 1. Univ Wisconsin, Madison. Agric & Life Sci. Graduate Student Travel Award. \$600 | 2001 |
| 2. Univ Wisconsin, Madison. Depart Entomol. Graduate Student Travel Award. \$400 | 2001 |
| 3. Univ Wisconsin, Madison. Agric & Life Sci. Graduate Student Travel Award. \$400 | 1999 |
| 4. Presidential Honor List (Stephen F. Austin State Univ, Nacogdoches Texas). \$1,000 | 1996 |
| 5. Academic scholarship for the distinguished undergraduate students.
Faculty of Forestry, Istanbul University. Istanbul. Turkey. | 1987-1991 |

Honorary awards

- | | |
|---|------|
| 1. The 2015-2016 Recipient of the Faculty of Agricultural, Life & Environmental Sciences Teaching Wall of Fame Award (Teachers of the Year). The award recognizes the outstanding individual contributions of staff members to the undergraduate teaching. | 2016 |
| 2. The 2014-2015 Recipient of the Faculty of Agricultural, Life & Environmental | 2015 |

Sciences Teaching Wall of Fame Award (Teachers of the Year).

3. **The 2010 Recipient of the Faculty of Agriculture, Life and Environmental Sciences Research & Innovation Award.** The award recognizes the outstanding individual contributions of new staff members in the areas of research or innovation, particularly achievements that contribute theoretically as well as to the practice of the discipline, and contribute to the Faculty's strategic goals in a direct way. 2010
4. **USDA-Forest Service -Pacific Southwest Research Station Appreciation Award For Outstanding Contributions to Research and development of Anti-aggregation Pheromones for *Dendroctonus* Bark Beetles.** 2007

CURRENT STUDENTS & POSTDOCTORAL FELLOWS

Postdoctoral Fellow

1. *Jonathan Angelo Cale* 2015-Current
Project title: Using the functional traits of soil fungi to improve post-disturbance pine regeneration.
2. *Jennifer G Klutsch* 2017-Current
Project title: Investigating the anatomical and chemical defenses of lodgepole pine and white spruce against mountain pine beetle and spruce budworm respectively.

Graduate students

1. *Shiyang Zhao*. PhD candidate 2014-Current
Project title: Are residual mature pine trees prone to attacks by secondary beetles and diseases in mountain pine beetle-killed lodgepole pine stands in Alberta?
2. *Altaf Hussain*. PhD Candidate 2014-Current
Project title: Do soil resources mediate defensive capacity and resource allocation of jack pine to MPB colonization across different resource-gradient levels?
3. *Margarete Dettlaff*. PhD Candidate. *Co-adviser: JC Cahill (Depart Biol. Sci.)* 2015-Current
Project title: Role of the chemical responses of aspen to competition and herbivory.
4. *Jean Ramos*. PhD candidate. *Co-adviser: J Karst (Depart Ren Res)*. 2017-Current
Project title: Soil fungal community response to and recovery from forest disturbances.
5. *Evan Fellrath*. MSc Student. *Co-adviser: J Karst (Depart Ren Res)*. 2016-Current
Project title: Fungal communities as drivers of tree insect and disease resistance.
6. *Sydne Giselle Guevara*. MSc student 2016-Current
Project title: Role of host tree nutrients in mountain pine beetle-symbiotic fungi interactions
7. *Jackson Beck*. MSc student. *Co-adviser: S Simard (U British Columbia)*. 2016-Current
Project title: Fungal community control of tree mineral acquisition and carbon allocation.
8. *Fuai Wang*. MSc student 2016-Current
Project title: Role of fungal volatiles explaining interspecies interactions between two competing bark beetle species, mountain pine beetle and *Ips pini* on jack pine.
9. Hafsa Najeeb. MSc student 2017-Current
Project title: Variations in Scots pine (*Pinus sylvestris*) monoterpene composition and subsequent effects on pheromone production by mountain pine beetle (*Dendroctonus ponderosae*)
10. Melanie de Kapelle. MSc student 2017-Current

Project title: Possible trade-off between primary and secondary compounds of whitebark pine.

Visiting Graduate Student

1. Majumdar Sudipto. PhD student. University of New Dehli, India. 2018
Understanding the role of soil chemicals in invasive biology of plants

Undergraduate students

1. *Gail Classens*. 2016-Current
Project title: Development of monitoring tools to detect mountain pine beetle at low densities on the eastern and northern edge of beetle expansion into Saskatchewan and NW Territories.
2. *Chen Xin Kee* 2017-Current
Characterizing the effects of genotype on the phloem resin duct characteristics of lodgepole pine and white spruce as part of the RESFOR project.

FORMER POSTDOCTORAL FELLOWS

1. *Inka Lusebrink*. Co-Supervisor: *M Evenden (Depart Bio Sci)* . 2008-2012
Project title: The chemical ecology of mountain pine beetle - host pine interactions
2. *Bin Shan*. 2011-2012
Project title: Evaluating quantity and quality of MPB pheromones in jack pine and lodgepole pine

FORMER UNDERGRADUATE, GRADUATE & VISITING STUDENTS

PhD students

1. *Jennifer Klutsch*. 2012-2017
Thesis title: Using a native plant-pathogen system as a model to investigate success of the invasive mountain pine beetle in jack pine.
2. *Ahmed Najar*. Co-adviser: *B Thomas (Depart Ren Res)* 2012-2017
Thesis title: Breaking the wall of silence of trees: Mining metabolomics to describe hybridization and predict performance in the *Populus – Sphaerulina musiva* pathosystem.
3. *Crisia Tabacaru* 2010-2015
Thesis title: Playing with fire: *Dendroctonus ponderosae* (mountain pine beetle) in post-burn lodgepole pine forests.
4. *Devin Goodsmann*. Co-adviser: *V Lieffers (Depart Ren Res)* 2008-2012
Thesis title: Physiological, ecological and environmental factors that predispose trees, stands and landscapes to infestation by tree-killing *Dendroctonus* beetles

MSc students

1. *Caitlin Mader*. MSc student 2015-2017
Thesis title: Ecology and life history of *Coccophagus gossypariae* (Hymenoptera: Aphelinidae), a parasitoid of *Eriococcus spurius*, (Hemiptera: Eriococcidae)
2. *Sanat Kanekar*. MSc student 2014-2017
Thesis title: The role of ectomycorrhizal fungi in induced defense chemistry of lodgepole pine.
3. *Guncha Ishangulyyeva* 2012-2015
Thesis title: Plant fatty acids influence brood development of mountain pine beetle and growth of its symbiotic fungus: Implications for host suitability and colonization by an herbivorous insect.

4. *Spencer Taft* 2013-2014
Thesis title: Variations in jack pine (*Pinus banksiana*) monoterpene composition and subsequent effects on pheromone production by mountain pine beetle (*Dendroctonus ponderosae*)
5. *Paul Cigan. Co-adviser: J Cahill (Depart Biol Sci)* 2011-2013
Thesis title: Mountain pine beetle attack and ectomycorrhizal feedback: the ecology of recovery in beetle killed forests.
6. *Ashley Wick. Co-adviser: John R Spence (Depart Ren Res)* 2011-2013
Thesis title: Beyond the host plant: Modeling habitat at multiple spatial scales for a northern peripheral butterfly population of *Apodemia mormo* (Lepidoptera: Riodinidae) in Saskatchewan, Canada
7. *Janet Therrien* 2010-2012
Thesis title: Interactions between host trees, bacteria, and fungi: impacts on mountain pine beetle (*Dendroctonus ponderosae*) reproduction
8. *Jenny Lazebnik* 2010-2012
Thesis title: Jack pine signalling and responses to herbivory
9. *Ahmed Najar. Co-adviser: S Landhausser (Depart Ren Res)* 2009-2012
Thesis title: Diverting resources to turn on resistance: influences of biotic and abiotic stresses on aspen seedlings
10. *Jessie Colgan* 2008-2010
Thesis title: Induced monoterpene responses in jack pine: defence against jack pine budworm and a fungal associate of the mountain pine beetle

Undergraduate students

1. *Ding Rusong*. Visiting Chinese Student from East China Normal University, China. 2018
Characterizing chemical volatiles emitted by mountain pine beetle associated fungi when they expose to beetle pheromones. He was sponsored by the UARE-China Scholarship Council Internship Program.
2. *Marla Roth* 2016-2018
Project title: Comparing primary and secondary chemistry of mountain pine beetle-attacked and healthy lodgepole pine trees.
3. *Valerie Marshall. Co-adviser: JC Cahill (Depart Biol Sci)*. 2015-2016
Project title: Spatial and temporal variation in above and belowground trembling aspen (*Populus tremuloides*) defensive chemistry.
4. *Christien Dykstra*. NSERC Undergraduate Student Research Awards and University of Alberta–Undergraduate Student Award Recipient. 2016-2017
Project title: Changes in soil microbial community and organic volatile emission in response to disturbances.
5. *Dandan Peng*. Visiting Chinese Student China Agricultural University, China. 2015-2016
Project title: Development of mountain pine beetle on various concentrations of host defense chemistry. She was sponsored by the UARE-China Scholarship Council Internship Program.
6. *Lin Yi*. Visiting Chinese Student. Sun Yat-sen University, China. 2015-2016
Project title: Interaction between one of the fungal symbionts of the mountain pine beetle and host chemistry. She was sponsored by the UARE-China Scholarship Council Internship Program.
7. *Alec Carrigy. Co-adviser: J Cahill (Depart Biol Sci)*. 2014-2015

Project title: Community-level determinants of smooth brome (*Bromus inermis*) growth and survival in a Canadian savannah.

8. *Marlena Muskens*. She conducted an independent research project with me. 2013
Project title: Infection by a mycangial fungus causes differential feedbacks in susceptibility of historical and novel host pines to mountain pine beetle.
9. *Cary Ma*. NSERC Undergraduate Student Research Awards Recipient. 2012
Project title: Evaluating attractiveness of mountain pine beetle pheromones emitted from jack pine and lodgepole pine.
10. *Caitlyn Andres*. NSERC Undergraduate Student Research Award Recipient 2011
Project title: Evaluating quantity and quality of mountain pine beetle pheromones in jack pine and lodgepole pine.

Visiting Graduate Students

1. *Estefanía Suárez Vidal*. Grupo de Xenética e Ecoloxía Forestal. Misión Biológica de Grupo Jan-May 2017 de Grupo de Xenética e Ecoloxía Forestal. Misión Biológica de Galicia (MBG-CSIC) (Spanish National Research Council). Pontevedra, Galicia, Spain.
Project title: Genetics and ecology of resistance to pest and pathogen in forest trees .Visiting PhD student.
2. *Bin Zhang*. Visiting PhD student. College of Plant Protec. Southwest Univ. Chongqing, China 2009
Project: Plant compensatory growth in aspen seedlings: the role of frequency and intensity of herbivory and resource availability

CURRENT SUPERVISORY COMMITTEE

Department of Renewable Resources

1. *Evren Hisarli (MSc) (2013-Current)*: Adv: Dr. Janusz Zwiazek.
2. *Tan Xiangfeng (PhD) (2013-Current)*: Adv: Dr. Janusz Zwiazek.

Department of Agricultural, Food and Nutritional Sciences

3. *Alaleh Boroomand (MSc) (2015-Current)*: Adv. Dr. Marleny D. A. Saldaña

Department of Biological Sciences (University of Alberta)

4. *Kelsey Jones (MSc) (2017-Current)*. Adv: Dr. Maya Evenden.
5. *Melodie Kunegel Lion (PhD) (2014-Current)*. Adv. Dr. Mark Lewis.

PAST SUPERVISORY COMMITTEE

1. *Felix Oboite (PhD) (2015-2018)*: Growth of understory spruce following mountain pine beetle attack and recalibration and validation of the Mixedwood Growth Model for black spruce. Adv. Dr. Phil Comeau
2. *Maryam Vaziri (MSc) (2015-2017)*. Physiological responses of *Poa pratensis*, *Poa juncifolia* and *Puccinellia nuttalliana* to salt stress. Adv: Dr. Janusz Zwiazek.
3. *Amanda St. Onge (MSc) (2014-2017)*. Optimization of semiochemical monitoring for pea leaf weevil, *Sitona lineatus* (Coleoptera: Curculionidae) in the Prairie Provinces Adv: Dr. Maya Evenden.
4. *Greg Pec (PhD candidate) (2012-2016)*. Cascading effects of insect outbreak on plant and fungal community structure and function. Adv: Drs. James F Cahill and Suzanne Simard (UBC).
5. *Ban Bao (PhD candidate) (2008-2015)*. Genetic variation is fundamental component for maintaining species diversity. Adv: Drs. Mark RT Dale & James F Cahill.

6. *Tyler Wist (PhD candidate) (2007-2011)*. Tritrophic interactions among *Caloptilia fraxinella* (Lepidoptera: Gracillariidae) its host *Fraxinus* spp. (Oleaceae) and its primary parasitoid *Apanteles* sp. (Hymenoptera: Braconidae). Depart Bio Sci. Univ Alberta. Adv: Dr. Maya Evenden.
7. *Jessica Kwon (MSc) (2011-2013)*: Development of a combined pheromone-based attracticide to target the codling moth (*Cydia pomonella*) and the apple clearwing moth (*Synanthedon myopaeformis*), two invasive pests in apple orchards in British Columbia. Adv: Dr. Maya Evenden.
8. *Holly Stover (MSc) (2011-2013)*. Non-native plant species management and restoration of foothills fescue grassland in Waterton Lakes National Park, Alberta. Adv. Anne Neath.
9. *Terrence Larsen (MSc) (2008-2012)*. *Mountain Pine Beetle Attacks: Implications for the recovery of grizzly bears in Alberta*. Depart Bio Sci. Univ Alberta. Adv: Dr. Erin Bayne.
10. *Charlene Wood (MSc) (2007-2012)*. Saproxylic beetle habitat associations in *Populus* deadwood of northern Alberta. Adv: Dr. John R Spence and David Langor (Northern Forestry Centre, Edmonton).
11. *Evan Esch (MSc) (2007-2011)*. Mountain pine beetle and whitebark pine interactions. Adv: John R Spence & David L Langor (Northern Forestry Centre, Edmonton, Alberta).
12. *Amy Nixon (MSc) (2010-2011)*. Forest tent caterpillar, natural enemies and aspen decline. Depart Bio Sci. Univ Alberta. Adv: Dr. Jens Roland.
13. *Amanda Doyle (MSc) (2009-2011)*. The role of induced defenses and delayed larval development in *Parnassius smintheus* population dynamics. Depart Bio Sci. Univ Alberta. Adv: Dr. Jens Roland.
14. *Marius Aurelian (MSc) (2008-2011)*. Mass Trapping: an emerging tool in managing Sesiid pests. Depart Bio Sci. Univ Alberta. Adv: Dr. Maya Evenden.
15. *Jennifer Jung (MSc) (2007-2010)*. Population-level responses of fathead minnow (*Pimephales promelas*) to alarm substances and pike odour. Depart Bio Sci. Univ Alberta. Adv: Dr. Bill Torn.
16. *Ben Proshek (MSc) (2007-2010)*. Phylogeography of *Apodemia mormo* (Lepidoptera: Riodinidae) and the status of several federally listed populations in Canada and the USA. Depart Bio Sci. Univ Alberta. Adv: Dr. Felix AH Sperling.
17. *Caroline Whitehouse (MSc) (2007-2010)*. Reproductive biology of *Dioryctria abietivorella* Groté (Lepidoptera: Pyralidae (Phycitinae)). Depart Bio Sci. Univ Alberta. Adv: Dr. Maya Evenden.

STUDENT (EXTERNAL) EXAMINER

2018

1. *Antonia Musso*. PhD Candidacy Exam. Department of Biological Sciences. University of Alberta. Adv. Maya Evenden.
2. *Sarah McPike*. MSc Final Exam. Department of Biological Sciences. University of Alberta. Adv. Maya Evenden.

2017

3. *Ashton Strum*. MSc Final Exam. Department of AFNS. University of Alberta. Adv. Jessamyn Manson and Cameron Carlyle.
4. *Xinli Cai*. MSc Final Exam. Department of Renewable Resources. University of Alberta. Adv. Mike Flannigan
5. *Federico Riva*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv. Scott Nielson
6. *Cordy Tymstra*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv. Mike Flannigan

7. *Dante Castellanos Acuna*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv. Andreas Hamann
8. *Angela Mei Phung*. MSc Final Exam. Department of AFNS. University of Alberta. Adv. Jessamyn Manson and Cameron Carlyle.

2016

9. *Dean Koch*. PhD Candidacy Exam. Department of Biological Sciences. University of Alberta. Adv. Mark Lewis.
10. *Sebastian Dietrich*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv. D MacKenzie.
11. *Seung-Il Lee*. PhD Final Exam. Department of Renewable Resources. University of Alberta. Adv. J Spence.

2013

12. *Gabriela Gonzalez*. MSc Final Exam. Department of Earth and Atmospheric Sciences. University of Alberta. Adv. Alex Wolfe.
13. *Jessica Stolar*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv. Scott Nielson
14. *Kaitlin Schott*. MSc Final Exam. Department of Renewable Resources. University of Alberta. Adv. Simon Landhausser.
15. *Xiaofeng Ruan*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv. Fangliang He
16. *Jian Zhang*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv. Fangliang He
17. *Elisabeth Beaubien*. PhD Final Exam. Department of Renewable Resources. University of Alberta. Adv. Andreas Hamann

2012

18. *Anne McIntosh*. PhD Final Exam. Department of Renewable Resources. University of Alberta. Adv: Ellen Macdonald.
19. *Boyd Mori*. PhD Candidacy Exam. Department of Biological Sciences. University of Alberta. Adv. Maya Evenden
20. *Esther Kamunya*. MSc Final Exam. Department of Renewable Resources. University of Alberta. Adv: John R Spence and Jan Volney (Northern Forestry Centre, Edmonton).
21. *Gendreau-Berthiaume, Benoit*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Ellen Macdonald.
22. *James K McCarthy*. MSc Final Exam. The role of bark beetles as vectors in the colonisation of windthrown timber by fungi. University of Canterbury, New Zealand. Adv: Raphael Didham (University of Canterbury) and Ecki Brockerhoff (Scion). External Thesis Examination.
23. *Asad Masood*. PhD. The role and management of bark beetle as a potential vector of Mango Sudden Death in Pakistan. University College of Agriculture, Bahauddin Zakariya University, Multan, Pakistan. Adv: Shafqat Saeed. External Thesis Examination.

2011

24. *Gendreau-Berthiaume, Benoit*. PhD Pre-Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Ellen Macdonald.
25. *Jordan Koopman*. MSc Final Exam. Ecosystem Science & Management. University of Northern British Columbia. Prince George, BC. Adv: Brian Aukema

26. *Sanatan Gubta*. PhD Pre-candidacy Exam. Department of Renewable Resources. University of Alberta. Adv. Derek MacKenzie & Sylvie Quideau

2010

27. *Michael Mbogga*. PhD Final Oral Examination. Department of Renewable Resources. University of Alberta. Adv: Andreas Hamann

28. *Anne McIntosh*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Ellen Macdonald.

29. *Pablo Pina*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Uldis Silins.

2009

30. *Francesco Cortini*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Phil Comeau

31. *Joelle Lemmen*. PhD Candidacy Exam. Department of Biological Sciences. University of Alberta. Adv. Maya Evenden

2008

32. *Anne McIntosh*. PhD Pre-Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Ellen Macdonald.

33. *Francesco Cortini*. PhD Pre-Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Andreas Hamann.

34. *Esther Kamunya*. PhD Pre-Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: John R Spence and Jan Volney (Northern Forestry Centre, Edmonton).

35. *Christian J. K. MacQuarrie*. PhD Final Oral Examination. Department of Renewable Resources. University of Alberta. Adv: John R Spence and David Langor (Northern Forestry Centre, Edmonton).

36. *Greg Smith*. MSc Final Exam. Ecosystem Science & Management. University of Northern British Columbia. Prince George, BC. Adv: B Staffan Lindgren

37. *Kyre Kausrud*. External examiner. PhD student. Depart Biology. University of Oslo. Oslo, Norway. Adv: B Økland (Norwegian For & Lands Inst, Norway). N Christian Stenseth (Univ Oslo, Norway).

STUDENT EXAMINER (CHAIR)

2018

1. *Martin Robinson*. MSc Defense. Department of Renewable Resources. University of Alberta. Adv: M Anne Naeth.

2. *Stephanie Ibsen*. PhD Candidacy. Department of Renewable Resources. University of Alberta. Adv: M Anne Naeth.

2017

3. *Tevfik Kuloglu*. PhD Candidacy. Department of Renewable Resources. University of Alberta. Adv: Vic Lieffers.

4. *Yue Hu*. PhD Candidacy. Department of Renewable Resources. University of Alberta. Adv: Barb Thomas.

2016

5. *Faidz Shahimin*. PhD Defense. Department of Renewable Resources. University of Alberta. Adv: Tariq Siddique.

2015

6. *Victoria Collins*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Tariq Siddique
7. *Aaron Bell*. MSc Final Exam. Department of Renewable Resources. University of Alberta. Adv: J Spence.

2014

8. *Kapilan Ranganathan*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Janusz Zwiazek.
9. *Matthew Gelderman*. MSc Final Exam. Department of Renewable Resources. University of Alberta. Adv: Ellen Macdonald

2013

10. *Kapilan Ranganathan*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Janusz Zwiazek.
11. *Feng Xu*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Janusz Zwiazek.
12. *Victoria Collins*. PhD Pre-candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Tariq Siddique
13. *Courtney Hughes*. PhD Pre-candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Scott Nielson
14. *Charlotte Norris*. PhD Defense. Department of Renewable Resources. University of Alberta. Adv: Sylvie Quideau.

2012

15. *Esther Kamunya*. MSc Final Exam. Department of Renewable Resources. University of Alberta. Adv: John R Spence and Jan Volney (Northern Forestry Centre, Edmonton).
16. *Gendreau-Berthiaume, Benoit*. PhD Candidacy Exam. Department of Renewable Resources. University of Alberta. Adv: Ellen Macdonald.
17. *Kangho Jung*. PhD Defense. Department of Renewable Resources. University of Alberta. Adv: Scott Chang

2011

18. *Javier Rodriguez Alvarez*. MSc Final Exam. Department of Renewable Resources. University of Alberta. Adv: Simon Landhausser
19. *Jordana Fair*. MSc Final Exam. Department of Renewable Resources. University of Alberta. Adv: Simon Landhausser & Vic Lieffers

STUDENTS AWARDED SCHOLARSHIP UNDER MY SUPERVISION

1. *Sydne Guevara Roza (MSc)*. Received Mary Louise Imrie Graduate Student Award, in the amount of \$1,500 in 2018.
2. *Fuai Wang (MSc)*. Received The William H McCardell Memorial Scholarship in Forest Science, in the amount of \$2,200 in 2017.
3. *Ahmed Najar (PhD)*. Received The Friends of the Faculty of Graduate Studies and Research Scholarship in 2017 (\$1,500).
4. *Shiyang (Violet) Zhao (PhD)*. Awarded (\$10,500) for Crossley Desmond I Crossley Memorial Scholarship in 2016. She received The Max MacLaggan Scholarship in the amount of \$2,400 in 2017.
5. *Jackson Beck (MSc)*. Awarded \$25,000 from UofA MSc Student Recruitment Award in 2016.
6. *Ahmed Najar (PhD)*. Awarded \$3,500 from Herbert and Jeannette Hall Graduate Scholarship in Forestry.

7. *Spencer Taft* (MSc). Awarded \$3,500 from Herbert and Jeannette Hall Graduate Scholarship in Forestry.
8. *Jennifer Klutsch* (PhD candidate). Awarded \$50,000/yr from the Vanier Canada Graduate Scholarships award from September 2012 to August 2015. This scholarship is the most prestigious graduate scholarship in Canada and is awarded by the Natural Sciences and Engineering Research Council of Canada (NSERC). Awarded \$30,000/yr stipend and \$1,500/yr research allowance from Alberta Innovates - Graduate Student Scholarship Competition Award from September 2011 to August 2015. Since Alberta Innovates does not top up Vanier Scholarship recipients, Jennifer was only allowed to receive the research allowance from September 2012 to August 2015. Received the Department of Renewable Resources – Doctoral Student Recruitment Scholarship Award in the amount of \$10,000 from September 2011 to August 2012 and \$5,000 from September 2012 to August 2013. Most recently, she received Izaak Walton Killam Memorial Scholarship (\$35,000/yr) for two years.
9. *Crisia Tabacaru* (PhD). Awarded for Dissertation Fellowship (\$22,000) from May 2014 to April 2015. Awarded NSERC-PGSD scholarship (\$21,000/yr) from May 2012 to April 2014. \$30,000/yr stipend and \$1,500/yr research allowance from Alberta Innovates - Graduate Student Scholarship Competition Award from September 2012 to August 2014. Awarded (\$11,500) for Crossley Desmond I Crossley Memorial Scholarship in 2011 and again in 2012. Received the Department of Renewable Resources - Doctoral Student Recruitment Scholarship Award in the amount of \$10,000 from September 2012 to August 2013 and \$5,000 from September 2013 to August 2014. Awarded (\$4,000) or Alberta, Sports, Recreation, Parks and Wildlife Foundation – Development Initiatives Program in 2010. Awarded \$13,720 from Alberta Conservation Association.
10. *Devin Goodsmann* (PhD). Awarded for NSERC-PGSD scholarship (\$17,500/yr) from May 2011 to April 2013.
11. *Paul Cigan*. Awarded \$5,000 from Alberta Conservation Association.
12. *Ashley Wick*. Awarded \$500 for the pest student presentation in the Behaviour and Ecology Student President Presentation Competition from Entomological Society of Canada. Edmonton, Alberta. (2012).
13. *Janet Ariss* (MSc). Awarded Queen Elizabeth II Scholarship in the amount of \$10,000 in 2011.
14. *Jenny Lazebnik* (MSc). Awarded Queen Elizabeth II Scholarship in the amount of \$10,000 in 2011. Awarded (\$1,000) for Alberta, Sports, Recreation, Parks and Wildlife Foundation – Development Initiatives Program in 2010.
15. *Jessie Colgan* (MSc). Awarded for NSERC-PGSM scholarship (\$17,500/yr) from May 2009 to April 2010, William H McCardell Memorial Scholarship (\$2,200) in Forest Science in 2009, and Walter H John Graduate Fellowship (\$4,627) in 2009.

COMMITTEES

Department of Renewable Resources

1. **Forestry Industry Lecture Series (FILS) Coordinator** 2011-2016
 The goal of FILS is to bring together industry, government and academia every six months. One prominent speaker is invited to the University of Alberta campus for 2-3 days to deliver the semiannual FILS lecture and is given opportunity to interact with the faculty, industry and government partners.
 - a) 66th FILS. Mr. Don Roberts (Vice-Chairman of Wholesale Banking and Managing Director of Investment Banking, CIBC World Markets): The global competition for land: The 4 Fs (Food, Feed, Fiber and Fuel) Nov 2011
 - b) 67th FILS. Dr. Steve Read (Chief Scientist at Forestry Tasmania): Variable retention in the southern hemisphere: Is managing fire-driven forests an ecological or a social issue? March 2012

- c) 68th FILS. Dr. Sally Aitken (University of British Columbia): Nov 2012
Can genetics help climate-proof our forests?
- d) 69th FILS. Dr. David MacLean (University of New Brunswick): March 2013
Sustainable forest management: Balancing stand dynamics, natural disturbances, biodiversity, conservation, forest zoning, intensive management, multiple values...
- e) 70th FILS. Dr. Kenneth F Raffa (University of Wisconsin, Madison): Nov 2013
Looking under the bark beetle hood to get a better grip at the wheel.
- f) 71st FILS. Edward (Ted) Seraphim (President and CEO of West Fraser, Canada): March 2014
The future looks bright for Alberta Forest Products
- g) 72nd FILS: Christian Messier (Univ Quebec, Montreal): Nov 2014
From management to stewardship: viewing forests as complex adaptive systems in an uncertain world.
- h) 73rd FILS: Richard Louv. Nature-deficit disorder and the new nature movement. March 2015
This was a part of 73rd FILS and the Centennial Lecture Series in celebration of 100 years of the Faculty of ALES.
- i) 74th FILS: David Cohen (Univ BC). Global winds of change: global forces buffeting Nov 2015
forests and the forest industry.
- j) 75th FILS: David Martell (Univ Toronto). Emerging challenges and opportunities March 2016
in the boreal forest region of Canada.
- k) 76th FILS: Paul Jannke (Principal of Forest Economic Advisors LLC). Nov 2016
How changing demographics, building technology and new end-use markets could pull lumber consumption out of the abyss in which it has languished for nearly a decade.
2. **Member of Renewable Resources Department Chair Selection Committee** 2015-2016
The Selection Committee was responsible for reviewing, deliberation, and voting to select a suitable candidate for department chair.
3. **Graduate Students Committee** 2011-2016
The committee discusses and decides about graduate student policies in the department, sends its members to chair graduate student thesis committees, candidacy or thesis defense exams, and selects candidates for departmental and university-wide graduate student awards.
4. **Chair for Honours & Awards Committee** 2011-2013
We usually meet 2 to 3 times a year to discuss the awards that are coming up, deciding who will be nominated for which awards and who from the committee will responsible for the awards we want to go forward with.
5. **Elected Member of Department Chair Selection Committee** 2010-2011
I was elected to serve on the Renewable Resources Department Chair Selection Committee. The Chair Selection Committee was responsible for reviewing, deliberation, and voting to select a suitable candidate for department chair.
6. **Search Committee for Industrial Research Chair in Tree Improvement** 2012
Department of Renewable Resources. University of Alberta.
7. **Search Committee for Wildland Fire Science & Management Tenure Track Position.** 2009
Department of Renewable Resources. University of Alberta

University of Alberta

8. **Elected Member of General Faculties Council (GFC) representing The Faculty of Agriculture, Life & Environmental Sciences.** 2017-2020
GFC is as one of the two governing authorities of the University of Alberta. Specific powers of GFC include granting of degrees, approval of the University's Academic Plan, academic programs, academic policies, academic awards, and the University Calendar. GFC is Chaired by the President and is composed of 158 members, including all university Vice-Presidents, all Faculty Deans, professors, students, librarians, and academic and non-academic staff.
9. **Field Research Activities Committee (FRAC)** 2016-2019
Its aim is to facilitate off-campus research activities, including all types of field, archival, library or other research, as well as field trips and field schools, carried out nationally or internationally.
10. **Member of Association of Academic Staff Council of University of Alberta** 2013-2018
The purposes of the Association of Academic Staff University of Alberta (AASUA) are to advance and protect the individual and collective interests of its members, to protect independence of thought and freedom of teaching and research, and to provide an environment appropriate to the University of Alberta towards enhancing the quality of a university education in Alberta. The AASUA is active in negotiating and administering the collective agreements, monitoring and influencing internal university governance, and participating in activities at both the federal and provincial level which affect universities. I represent three departments at the Faculty of ALES, including Renewable Resources, Human Ecology, and Resource Economics and Environmental Sociology at the Council.
11. **Academic staff representative serving on the General Faculty Council (GFC) Academic Planning Committee (APC).** 2014-2017
APC is GFC's senior committee dealing with academic, financial and planning issues. As such, it is responsible to GFC (or the Board) for the following specific matters as well as may also ask to consider or recommend to GFC on any academic issue, including 1) any academic issues related to restructuring, 2) any research-related issues, or 3) issues linked to academic service units where those issues have a significant academic impact. APC is also responsible to GFC for promoting an optimal learning environment for students and excellence in teaching, research, and graduate studies.
12. **The General Faculty Council–Elected Member of Undergraduate Awards & Scholarship Committee.** 2012-2015
The roles of this committee are to: approve new undergraduate awards; approve changes to any undergraduate student award already approved by General Faculty Council – Undergraduate Awards & Scholarship Committee; approve the minimum value of a major award for undergraduate students, and to review that value regularly; approve the minimum value of an undergraduate award administered by the Student Awards Office, and to review that value regularly; approve the definition of a full normal course load for purposes of awards where more than one Faculty is involved; recommend to the GFC Executive Committee on any new policy or revisions to existing policy governing awards for undergraduate students; consider any proposal emanating from any member of the University community for changes to GFC undergraduate student awards policy, and where deemed appropriate by GFC UASC, recommend changes to the GFC Executive Committee.
13. **General Faculties Council - Elected Member of Department Chair Selection Committee.** 2011-2014
I was elected by the General Faculties Council - Nominating Committee. Members are chosen in rotation to serve on Department Chair Selection Committee. I served in the selection of Department Chair of Music. We evaluated 10 applicants and selected 3 for interview.
 - a) Department of Medical Microbiology and Immunology 2013-2014
 - b) Department of Oncology 2012
 - c) Department of Music 2012

14. **Faculty of Graduate Studies & Research - Graduate Scholarship Committee (GSC)** 2008-2012
I reviewed about 120 student applications per year in the general area of ecology. In addition, I attended committee and sub-committee meetings and participated to discussions of all applications.

National Level

1. **Steering Committee for the joint Entomological Society of Canada** 2011-2012
Entomological Society of Alberta Meeting. I was responsible for the award committee.
2. **Steering Committee for Canadian Forest Health Genomics Initiative** 2008-2009
Workshop. The steering committee, selected by Genome Centers in Alberta and British Columbia, was responsible for developing the Canadian Forest Health Genomics Initiative. Steps included setting the workshop agenda, identifying key participants, and inviting the most important participants. I represented both the U of A and Tria Project (<http://www.thetriaproject.ca/index.php>) in this initiative. The workshop was held in Toronto on March 31, 2009. I was also member of the writing team for a report titled "Canadian Forest Health Genomics – Canadian Strengths Address Forestry Challenges". It was published in 2009.

International Level

1. **Member of the Scientific Program Organizing Committee for Western Forest Insect Work Conference.** Jackson, Wyoming in 2017. 2016-2017
2. **Member of the Scientific Program Organizing Committee for North American Forest Insect Work Conference.** Washington, D.C. in 2016. 2014-2016
3. **Emerald Ash Borer Research and Technical Review Panel.** Pittsburgh, Pennsylvania. 2005

PUBLICATIONS

*Peer-reviewed Journals (Graduate students are underlined, *designates undergraduate student, ** designates postdoctoral research fellows)*

Accepted or In-Press

1. Kanekar SS, JA Cale**, **N Erbilgin**. Ectomycorrhizal fungal species differentially affect the induced defensive chemistry of lodgepole pine. *Oecologia*.

2018

2. Roth M*, A Hussain, JA Cale**, **N Erbilgin**. Successful colonization of lodgepole pine trees by mountain pine beetle increased monoterpane production and exhausted carbohydrate reserves. *J Chemical Ecology*. 44: 209-214

2017

3. Cale JA**, M Muskens*, A Najjar, G Ishangulyyeva, A Hussain, SS Kanekar, JG Klutsch, S Taft, **N Erbilgin**. Rapid monoterpane induction promotes the susceptibility of a novel host pine to mountain pine beetle colonization but not to beetle-vectored fungi. *Tree Physiology*. 37: 1597-1610.
4. Klutsch JG, SF Shamoun, **N Erbilgin**. Drought stress leads to systemic induced susceptibility to a necrotrophic fungus associated with mountain pine beetle in *Pinus banksiana* seedlings. *PLoS ONE* PLoS ONE 12(12): e0189203.
5. Cahill JF, JA Cale*, J Karst, T Bao, G Pec, **N Erbilgin**. No silver bullet: Different soil handling techniques are useful for different research questions, exhibit differential type I and II error rates, and are sensitive to sampling intensity. [A response to K.O. Reinhart and M. J. Rinella. 2016. A common soil handling technique can generate incorrect estimates of soil biota effects on plants. *New Phytologist* 210:786-789.]. *New Phytologist*. 216: 11-14

6. Klutsch JG, JA Cale**, C Whitehouse, SS Kanekar, **N Erbilgin**. Trap trees: An effective method for monitoring mountain pine beetle activities in novel habitats. *Canadian J Forest Research*. 47: 1-6
7. Raffa KF, CJ Mason, P Bonello, S Cook, **N Erbilgin**, K Keefover-Ring, JG Klutsch, C Villari, PA Townsend. Defense syndromes in lodgepole-whitebark pine ecosystems related to degree of historical exposure to mountain pine beetles. *Plant Cell & Environment*. 40:1791-1806
8. **Erbilgin N**, JA Cale**, A Hussain, G. Ishangulyyeva, JG Klutsch, A Najar, S Zhao. Weathering the storm: How lodgepole pine trees survive mountain pine beetle outbreaks. *Oecologia*. 184: 469-478
9. Klutsch JG, A Najar, P Sherwood, P Bonello, **N Erbilgin**. A native parasitic plant systemically induces resistance in jack pine to a fungal symbiont of invasive mountain pine beetle. *J Chemical Ecology*. 43: 506-518 (It appeared on the cover of the journal).
10. **Erbilgin N**, JA Cale**, I Lusebrink**, A Najar, JG Klutsh, P Sherwood, E Bonello, ML Evenden. Water-deficit and fungal infection can differentially affect the production of different classes of defense compounds in two host pines of mountain pine beetle. *Tree Physiology*. 37: 338-350
11. **Erbilgin N**, JD Stein, RE Acciavatti, NE Gillette, SR Mori, K Bischel, JA Cale, CR Carvalho, DL Wood. A blend of ethanol and (-)- α -pinene were highly attractive to native siricid woodwasps (Siricidae, Siricinae) infesting conifers of the Sierra Nevada and the Allegheny Mountains. *J Chemical Ecology*. 43: 172-179
12. Semiz G, **N Erbilgin**, JK Holopainen. *Hylobius abietis* feeding on the novel host *Pinus brutia* Ten. increases emission of volatile organic compounds. *J Applied Entomology*. 141: 133-140.
13. Pec GJ, J Karst, DL Taylor, PW Cigan, **N Erbilgin**, JEK Cooke, SW Simard, JF Cahill. Change in soil fungal community structure driven by a decline in ectomycorrhizal fungi following a mountain pine beetle outbreak. *New Phytologist*. 213: 864-873.

2016

14. Carrigy AA*, GC Stotz, MA Dettlaff, GJ Pec, Inderjit, **N Erbilgin**, JF Cahill Jr. Community-level determinants of smooth brome (*Bromus inermis*) growth and survival in the aspen parkland. *Plant Ecology (Special Issue)*. 217: 1395-1413
15. Cale JA**, RM Collignon, JG Klutsch, S Kanekar, A Hussain, N Erbilgin. Fungal volatiles can act as carbon sources and semiochemicals to mediate interspecific interactions among bark beetle-associated fungal symbionts. *PLoS ONE. Vol 11 (9): e0162197*
16. Ishangulyyeva G, A Najar, J Curtis, **N Erbilgin**. Fatty acid composition of novel host jack pine do not prevent host acceptance and colonization by the invasive mountain pine beetle and its symbiotic fungus. *PLoS ONE. Vol 11 (9): e0162046*
17. Klutsch J, A Najar, JA Cale**, **N Erbilgin**. Direction of interaction between mountain pine beetle (*Dendroctonus ponderosae*) and resource-sharing wood-boring beetles depends on plant parasite infection. *Oecologia*. 182: 1-12 (Selected the best student paper in Ecology in 2016)
18. Cale JA**, JG Klutsch, **N Erbilgin**, J Negrón, JD Castello. Using structural sustainability for forest health monitoring and triage: case study of a mountain pine beetle (*Dendroctonus ponderosae*)-impacted landscape. *Ecological Indicators*. 70: 451-459
19. Tabacaru CA, J Park, **N Erbilgin**. Prescribed fire does not promote outbreak of a primary bark beetle at low-density populations. *J Applied Ecology*. 53: 222-232
20. Lusebrink I**, **N Erbilgin**, M Evenden. The effects of water limitation on volatile emission, defense response, and brood success of *Dendroctonus ponderosae* in two pine hosts, lodgepole and jack pine. *Frontiers in Ecology & Environment*. 4:2. doi: 10.3389/fevo.2016.00002.

2015

21. Cale JA**, S Taft, JG Klutsch, JD Sweeney, **N Erbilgin**. Mountain pine beetle (*Dendroctonus ponderosae*) can produce its aggregation pheromone and complete brood development in naïve red pine (*Pinus resinosa*) under laboratory conditions. *Canadian J Forest Research*. 45: 1873-1877.
22. Tabacaru CA, SM McPike, **N Erbilgin**. Fire-mediated interactions between a tree-killing bark beetle and its competitors. *Forest Ecology & Management*. 356: 262-272.
23. Tabacaru CA, **N Erbilgin**. Competitors and natural enemies may cumulatively mediate *Dendroctonus ponderosae* colonization of burned *Pinus* forests. *Forest Ecology & Management*. 337: 98-109.
24. Karst J†, **N Erbilgin**†, GJ Pec, PW Cigan, A Najar, JC Cahill, S Simard. Ectomycorrhizal fungi mediate indirect effects of a beetle outbreak on secondary chemistry and establishment of pine seedlings. †These authors contributed equally to this work. *New Phytologist*. 208: 904–914
25. Therrien J, CJ Mason, JA Cale**, A Adams**, BH Aukema, CR Currie, KF Raffa, **N Erbilgin**. Bacteria influence mountain pine beetle brood development through interactions with symbiotic and antagonistic fungi: implications to climate-driven host range expansion. *Oecologia*. 179: 467-485.
26. Sullivan BT, **N Erbilgin**. Evidence for divergence in cuticular hydrocarbon sex pheromone between California and Mississippi (United States of America) populations of bark beetle parasitoid *Roptrocercus xylophagorum* (Hymenoptera: Pteromalidae). *Canadian Entomologist*. 147: 472-475.
27. Taft S, A Najar, **N Erbilgin**. Pheromone production by an invasive bark beetle varies with monoterpene composition of its naïve host. *J Chemical Ecology*. 41:540–549
28. Taft S, A Najar, J Godbout, J Bousquet, **N Erbilgin**. Variation in foliar monoterpenes across the range of jack pine reveal three widespread chemotypes: implications to host expansion of invasive mountain pine beetle. *Frontiers in Plant Sciences*. 6: 342. doi: 10.3389/fpls.2015.00342.
29. Cigan PW, J Karst, JF Cahill, Jr., AN Sywenky*, GJ Pec, **N Erbilgin**. Influence of bark beetle outbreaks on nutrient cycling in native pine stands in western Canada. *Plant & Soil*. 390: 29-47
30. Pec GJ, J Karst, AN Sywenky*, PW Cigan, **N Erbilgin**, SW Simard, JF Cahill. Rapid increases in forest understory diversity and productivity following a mountain pine beetle (*Dendroctonus ponderosae*) outbreak in pine forests. *PLoS ONE 10 (4): e0124691*
31. Goodsman DW, JS Goodsman, DW McKenney, VJ Lieffers, **N Erbilgin**. Too much of a good thing: landscape-scale facilitation eventually turns into competition between a lepidopteran defoliator and a bark beetle. *Landscape Ecology*. 30: 301-312.

2014

32. **Erbilgin N**, AD Galvez, B Zhang, A Najar. Resource availability and repeated defoliation mediate compensatory growth in trembling aspen (*Populus tremuloides*) seedlings. *PeerJ 2:e491; DOI 10.7717/peerj.491*
33. **Erbilgin N**, C Ma*, C Whitehouse, B Shan**, A Najar, M Evenden. Chemical similarity between historical and novel host plants promotes range and host expansion of the mountain pine beetle in a naïve host ecosystem. *New Phytologist*. 201:940-950
34. Najar A, SM Landhäusser, JGA Whitehill**, P Bonello, **N Erbilgin**. Reserves accumulated in non-photosynthetic organs during the previous growing season drive plant defenses and growth in aspen in the subsequent growing season. *J Chemical Ecology*. 40: 21-30
35. Wick AA, S Pruss, JR Spence, **N Erbilgin**. Microhabitat use in a northern peripheral population of *Apodemia mormo*: factors beyond the host plant. *Journal of Lepidopterists' Society*. 68: 54-60
36. Treu R, J Karst, M Randall*, GJ Pec, P Cigan, S Simard, J Cooke, **N Erbilgin**, JF Cahill. Decline of ectomycorrhizal fungi following mountain pine beetle infestation. *Ecology 95: 1096–1103*

2013

37. Lusebrink I**, **N Erbilgin**, M Evenden. The lodgepole × jack pine hybrid zone in Alberta, Canada: a stepping stone for the mountain pine beetle on its journey east across the boreal forest? *J Chemical Ecology*. 39:1209-1220.
38. Adams AS**, FO Aylward, SM Adams, **N Erbilgin**, B Aukema, CR Currie, G Suen, KF Raffa. Mountain pine beetles colonizing historical and naïve host trees are associated with a bacterial community highly enriched in genes contributing to terpene metabolism. *Applied & Environmental Microbiology*. 79: 3468-3475
39. Goodsman DW, I Lusebrink**, SM Landhäuser, **N Erbilgin**, VJ Lieffers. Variation in carbon availability, defense chemistry and susceptibility to fungal invasion along the stems of mature trees. *New Phytologist*. 197: 586–594
40. McPherson BA, **N Erbilgin**, P Bonello, DL Wood. Diverse fungal species are introduced into *Phytophthora ramorum*-infected coast live oaks following ambrosia beetle colonization in northern California. *Forest Ecology & Management*. 291:30–42

2012

41. **Erbilgin N**, LJ Colgan. Differential effects of plant ontogeny and damage type on phloem and foliage monoterpenes in jack pine (*Pinus banksiana*). *Tree Physiology*. 32: 946–957
42. Goodsman D, **N Erbilgin**, V Lieffers. The impact of phloem nutrients on overwintering mountain pine beetles and their fungal symbionts. *Environmental Entomology*. 41: 478-486
43. Wick AA, J Janelle, S Pruss, **N Erbilgin**. First observations of Mormon Metalmark (*Apodemia mormo*) oviposition behaviour in Canada. *Canadian Field Naturalist*. 126: 34-37
44. Kausrud K, B Økland, O Skarpaas, JC Gregoire, **N Erbilgin**, NC Stenseth. Population dynamics in changing environments: the case of an eruptive forest pest species. *Biological Review*. 87:34–51.
45. Zargaran MR, **N Erbilgin**, Y Ghosta. Change of oak gall wasps species diversity in relation to presence of oak powdery mildew (*Erysiphe alphitoides*). *J Zoological Studies*. 51: 175-184.
46. Gillette NE, EM Hansen, CJ Mehmehl, SR Mori, JN Webster, **N Erbilgin**, DL Wood. Area-wide application of verbenone-releasing flakes reduces mortality of whitebark pine, *Pinus albicaulis* caused by the mountain pine beetle, *Dendroctonus ponderosae* (Coleoptera: Scolytinae). *Agriculture & Forest Entomology* 14: 367–375
47. Gillette NE, JM Constance, SR Mori, JN Webster, DL Wood, **N Erbilgin**, DR Owen. The push-pull tactic for mitigation of mountain pine beetle in lodgepole and whitebark pines: breaching the maginot line. *Environmental Entomology*. 41: 1575–1586

2011

48. Colgan LJ, **N Erbilgin**. Tree-Mediated Interactions between the jack pine budworm and a mountain pine beetle fungal associate. *Ecological Entomology*. 36: 425-434
49. Økland B, **N Erbilgin**, O Skarpaas, E Christiansen, B Långström. Inter-species interactions and ecosystem effects of non-indigenous invasive and native tree-killing bark beetles. *Biological Invasions*. 13: 1151-1164
50. Zhao T, A-K Borg-Karlson, **N Erbilgin**, P Krokene. Host resistance elicited by exogenous application of methyl jasmonate alters the aggregation pheromone of spruce bark beetle, *Ips typographus*. *Oecologia*. 167: 691–699
51. Yuceer C, C-Y Hsu, **N Erbilgin**, KD Klepzig. Ultrastructure of the southern pine beetle mycangium: complex morphology for complex interactions. *Acta Zoologica*. 92: 216-224.
52. Lusebrink I**, ML Evenden, FG Blanchet, JEK Cooke, **N Erbilgin**. Effect of water stress and fungal inoculation on monoterpene emission from an historical and a new pine host of the mountain pine beetle. *J Chemical Ecology*. 37: 1013-1026.

53. Kausrud KL, O Skarpaas, JC Gregoire, **N Erbilgin**, M Gilbert, NC Stenseth, B Økland. Trees Wanted; dead or alive! Host selection and population dynamics in tree-killing bark beetles. *PLoS ONE*. 6(5): e18274. [http: www.plosone.org](http://www.plosone.org).

2010

54. Colgan LJ, **N Erbilgin**. The ecological interaction of the mountain pine beetle and jack pine budworm in the boreal forest. *Forest Chronicle*. 86: 766-774.
55. Masood A, S Saeed, **N Erbilgin**, YJ Kwon. Role of stressful mango host conditions in attraction and colonization by the mango bark beetle, *Hypocryphalus mangiferae* Stebbing (Coleoptera: Curculionidae: Scolytinae) and in the symptom development of quick decline on mango trees in Pakistan. *Entomological Research*. 40: 316-327.
56. Goodsman D, VJ Loeffers, SM Landhäuser, **N Erbilgin**. Carbohydrate reserves of lodgepole pine decline with tree size and fertilization. *Forest Ecology & Management*. 260: 1914-1920
57. Peterson K, Amosa E, Shelley P, Erbilgin N. First caterpillar observations of the mormon metalmark butterfly in Grassland National Park, Saskatchewan. *Blue Jay*. 68: 37-40.
58. Yilmaz N, N Erbilgin. Pinus pinea is resistant to fire and insect damage. *Orman Muh*: 47: 18-21

2009

59. **Erbilgin N**, DL Wood, TR Gordon, AJ Storer. Bark beetle (Coleoptera: Scolytidae)-mediated fungal infections of susceptible trees induce resistance to subsequent infections in a dose dependent manner. *Agricultural & Forest Entomology*. 11: 255-263
60. Gillette NE, **N Erbilgin**, JN Webster, L Pederson, SR Mori, JD Stein, DR Owen, KM Bischel, DL Wood. Aerially applied verbenone-releasing flakes protect *Pinus contorta* stands from attack by *Dendroctonus ponderosae* in California and Idaho. *Forest Ecology & Management*. 257: 1405-1412
61. Gillette NE, CJ Mehmehl, JN Webster, SR Mori, **N Erbilgin**, DL Wood, JD Stein. Aerially applied methylcyclohexenone-releasing flakes protect *Pseudotsuga menziesii* stands from attack by *Dendroctonus pseudotsugae*. *Forest Ecology & Management*. 257: 1231-1236
62. Raffa KF, BH Aukema, BJ Bentz, A Carroll, **N Erbilgin**, DA Herms, JA Hicke, RW Hofstetter, S Katovich, BS Lindgren, J Logan, W Mattson, AS Munson, DJ Robison, DL Six, PC Tobin, P Townsend, KF Wallin. A literal meaning of forest health safeguards against misuses and misapplications. (Secondary authors are listed by alphabetical order). *J Forestry*. 107: 276-277.

2008

63. **Erbilgin N**, G Ritokova, DL Wood, TR Gordon, AJ Storer. Temporal variation in contamination of pine engraver beetles with *Fusarium circinatum* in native Monterey pine forests in California. *Plant Pathology*. 57:1103-1108.
64. **Erbilgin N**, NE Gillette, JD Stein, AS Nelson, F Uzoh, DL Wood. Acetophenone superior to verbenone for reducing attraction of western pine beetle *Dendroctonus brevicornis* to its aggregation pheromone. *Agricultural & Forest Entomology*. 10:433-441.
65. Zhang QH, **N Erbilgin**, SJ Seybold. GC-EAD responses of four bark beetle species associated with Monterey pine trees in coastal California to common host, nonhost and bark beetle volatiles: Similarities and disparities. *Chemoecology*. 18:243-254.
66. McPherson BA, **N Erbilgin**, DL Wood, P Svihra, AJ Storer, RB Standiford. Attraction of saprotrophic bark and ambrosia beetles (Coleoptera: Scolytidae) to coast live oaks (*Quercus agrifolia*) infected by *Phytophthora ramorum*. *Agricultural & Forest Entomology*. 10:315-321.

2007

67. **Erbilgin N**, NE Gillette, JD Stein, DR Owen, DL Wood. Acetophenone as an anti-attractant for the western pine beetle, *Dendroctonus brevicomis*, LeConte (Coleoptera: Curculionidae). *J Chemical Ecology*. 33: 817-823.
68. **Erbilgin, N**, E Christiansen, P Krokene. A host monoterpene influences *Ips typographus* responses (Coleoptera: Curculionidae, Scolytinae) to its aggregation pheromone: Implications for host colonization of bark beetles. *Agricultural & Forest Entomology*. 9: 135-140.
69. O'Brien ML, KL O'Hara, **N Erbilgin**, DL Wood. Overstory and shrub effects on natural regeneration processes in native *Pinus radiata* stands. *Forest Ecology & Management*. 240: 178-185.
70. **Erbilgin N**, N Gillette, D Owen, L Merrill, R Campos, TM Montiel, J Sun, J Stein, KF Raffa, DL Wood. Attraction of *Dendroctonus valens* to a common host volatile across a broad range of its native North American and in its introduced Asian regions. *J Chemical Ecology*. 33: 131-146.

2006

71. Bonello P, TR Gordon, DL Wood, DA Herms, **N Erbilgin**. Nature and ecological implications of pathogen-induced systemic resistance in conifers: A novel hypothesis. *Physiological & Molecular Plant Pathology*. 68: 95-104.
72. **Erbilgin N**, E Christiansen, P Krokene, G Zeneli, J Gershenzon. Exogenous application of methyl jasmonate elicits defenses in Norway spruce (*Picea abies*) and reduces host colonization by the bark beetle *Ips typographus*. *Oecologia* 148: 426-436

2005

73. Raffa KF, BH Aukema, **N Erbilgin**, KD Klepzig, KF Wallin. Interactions among conifer terpenoids and bark beetles across multiple levels of scale: an attempt to understand links between population patterns and physiological processes. *Recent Advances in Phytochemistry*. 39:79-118.
74. Økland B, A Liebhold, O Bjørnstad, **N Erbilgin**, P Krokene. Are bark beetle outbreaks less synchronous than forest Lepidoptera outbreaks? *Oecologia* 146: 365-372
75. **Erbilgin N**, AJ Storer, DL Wood, TR Gordon. Colonization of cut branches of five coniferous hosts of the pitch canker fungus (*Fusarium circinatum*) by *Pityophthorus* spp. (Coleoptera: Scolytidae) in central, coastal California. *Canadian Entomologist*. 137: 337-349.

2004

76. **Erbilgin N**, DL Dahlsten, P Chen. Effects of indigenous natural enemies on the biological control of an exotic *Glycaspis brimblecombei* (Homoptera: Psylloidea), a pest of eucalyptus trees, and its introduced parasitoid, *Psyllaephagus bliteus* (Hymenoptera: Encyrtidae). *Biological Control*. 31:329-337.
77. Dahlsten DL, DL Six, AB Lawson, DL Rowney, **N Erbilgin**, KF Raffa. Attraction of *Ips pini* (Coleoptera: Scolytidae) and its predators to natural attractants and synthetic semiochemicals: implications for population monitoring in northern California. *Environmental Entomology*. 33:1554-1561.

2003

78. **Erbilgin N**, KF Raffa. Spatial analysis of forest gaps resulting from bark beetle colonization of red pines experiencing belowground herbivory and root infection. *Forest Ecology & Management*. 177: 145-153.
79. **Erbilgin N**, JS Powell, KF Raffa. Effect of varying monoterpene concentrations on the response of *Ips pini* (Coleoptera: Scolytidae) to its aggregation pheromone: implications for pest management and ecology of bark beetles. *Agricultural & Forest Entomology* 5: 269-274.
80. Dahlsten DL, DL Six, **N Erbilgin**, KF Raffa, AB Lawson, DL Rowney. Attraction of *Ips pini* (Coleoptera: Scolytidae) and its predators to various enantiomeric ratios of ipsdienol and lanierone in California: implications for the augmentation and conservation of natural enemies. *Environmental Entomology* 32: 1115-1122.

2002

81. **Erbilgin N**, KF Raffa. Association of declining red pine stands with reduced populations of bark beetle predators, seasonal increases in root colonizing insects, and incidence of root pathogens. *Forest Ecology & Management*. 164: 221-236.
82. **Erbilgin N**, EV Nordheim, BH Aukema, KF Raffa. Population dynamics of *Ips pini* and *Ips grandicollis* in red pine plantations in Wisconsin: within- and between- year associations with predators, competitors, and habitat quality. *Environmental Entomology*. 31: 1043-1051.

2001

83. **Erbilgin N**, KF Raffa. Modulation of predator attraction to pheromones of two prey species by stereochemistry of plant volatiles. *Oecologia* 127: 444-453.
84. **Erbilgin N**, KF Raffa. Kairomonal range of generalist predators in specialized habitats: responses to multiple phloeophagous species emitting pheromones vs. host odors. *Entomologia Experimentalis et Applicata*. 99: 205-210.
85. **Erbilgin N**, A Szele, KD Klepzig, KF Raffa. Trap type, chirality of α -pinene, and geographic region affect sampling efficiency of root and lower stem insects in pine. *J Economic Entomology* 94: 1113-1121.

2000

86. **Erbilgin N**, KF Raffa. Effects of host tree species on attractiveness of tunneling pine engraver, *Ips pini* (Coleoptera: Scolytidae), to conspecifics and insect predators. *J Chemical Ecology* 26: 823-840.
87. **Erbilgin N**, KF Raffa. Opposing effects of host monoterpenes on responses by two sympatric species of bark beetles to their aggregation pheromones. *J Chemical Ecology* 26: 2527-2548.

In-review

1. Mason CJ, K Keefover-Ring, C Villari, JG Klutsch**, S Cook, P Bonello, **N Erbilgin**, KF Raffa, PA Townsent. Anatomical defenses against bark beetles related to degree of historical exposure between species and are allocated independently of chemical defenses withing trees. *Plant Cell Environment*
2. Klutsch JG**, **N Erbilgin**. Impact of dwarf mistletoe on chemical and anatomical defenses, growth, and physical characteristics in jack pine. *Tree Physiology*.
3. Dettlaff M, V Marshall*, **N Erbilgin**, JF Cahill, Jr. Variation in *Populus tremuloides* root chemistry related to season, but not leaf chemistry, tree size or stand position. *AoB PLANTS*
4. Guevara-Razo S, G Classens*, A Hussain, **N Erbilgin**. Short and long-term storage of jack pine bolts in associated with higher concentrations of monoterpenes and nutrients. *J Chemical Ecology*.
5. **Erbilgin N**. Are novel plant chemicals friends or foes of native invasive insect herbivores. *New Phytologist*
6. Cale JA**, JG Klutsch**, CB Dykstra*, B Peters*, **N Erbilgin**. Pathophysiological responses of the resistance metabolomes of pines lack interspecific differences but exhibit specificity toward ophiostomatoid fungi. *Plant Physiology*

PRESENTATIONS

*Invited Speaker (Graduate students are underlined, * indicates undergraduate student, ** indicates postdoctoral researcher)*

2018

1. **N Erbilgin**. Are novel plant chemicals friends or foes of native invasive insect herbivores? Canadian Forest Service-Pacific Forestry Centre, Victoria, BC.

2017

2. **N Erbilgin.** Succumbing to invasion: novel hosts of mountain pine beetle lack defense chemicals that drive survival of historical host trees during mountain pine beetle outbreak. Entomological Society of America. Denver, Colorado.
3. **N Erbilgin, JA Cale**, JG Klutsch**.** Phytochemical factors affecting the activities of mountain pine beetle-vectored fungi in a novel host pine. Entomological Society of America. Denver, Colorado.
4. **N. Erbilgin.** Two tails of host defense compounds. Swedish University of Agricultural Sciences. Southern Swedish Forest Research Center. Alnarp, Sweden.
5. **N. Erbilgin.** Genomic assisted tree breeding and role of chemical ecology. Czech University of Life Sciences Prague, Faculty of Forestry and Wood Sciences (CULS, FFWS). Prague. Czech Republic.
6. **N Erbilgin.** Linking host plant chemicals to the host expansion of invasive mountain pine beetle in western Canada. Swiss Federal Research Institute for Forest, Snow and Landscape Research WSL. Birmensdorf, Switzerland.
7. **N Erbilgin.** Insects, Chemical Ecology and Tree Improvement. Working on Genomic Selection Technology & Application in Tree Improvement in Alberta. Edmonton, Alberta
8. **N Erbilgin.** Using the functional traits of soil fungi to improve post-disturbance pine regeneration. 2017 SERG-International Workshop. Fredericton, New Brunswick.
9. **N Erbilgin.** Development of monitoring tools to detect mountain pine beetle at low densities on the eastern and northern edge of beetle expansion into Saskatchewan and Northwest Territories. 2017 SERG-International Workshop. Fredericton, New Brunswick.

2016

1. **N Erbilgin.** Role of chemicals of novel plants in climate-driven host expansion of invasive mountain pine beetle in western Canada. A part of the Forest Insect Invasion in a Changing Climate: Mechanisms and Risks Symposium. International 2016 XXV International Congress of Entomology. Orlando, Florida.
2. **N Erbilgin.** Chemicals in novel host plants support climate-driven host expansion of the invasive mountain pine beetle in western Canada. "Changing Forests, Imperiled Habitats: the Roles Arthropods Play". 2016 North American Forest Insect Work Conference. Washington, D.C. USA.
3. **N Erbilgin.** Opening presentation for the "Characterizing above and below ground changes in forests aftermath of insect outbreaks" workshop at the 2016 North American Forest Insect Work Conference. Washington, D.C. USA.
4. **N Erbilgin.** Functional characterization of insect and microbial biodiversity in response to disturbances in complex forest ecosystems. Symposium on Euroasian Biodiversity. Plenary Speaker. Antalya, Turkey.
5. **N Erbilgin, S Zhao.** Do post-mountain pine beetle stand conditions accelerate mortality of residual overstory lodgepole pine trees? fRI Research–Mountain pine beetle research and stand rehabilitation information exchange forum. Grande Prairie, Alberta. Canada.
6. **N Erbilgin.** Development of monitoring tools to detect mountain pine beetle at low densities at the edge of beetle expansion. fRI Research–Mountain pine beetle research and stand rehabilitation information exchange forum. Grande Prairie, Alberta. Canada.
7. **N Erbilgin.** Development of monitoring tools to detect mountain pine beetle at low densities at the edge of beetle expansion. 2016 SERG-International Workshop. Saskatoon, Saskatchewan.

2015

8. **N Erbilgin.** Above and belowground interactions mediate ecosystem responses to insect invasion. Department of Biological Sciences, University of Birmingham. UK.

9. **N Erbilgin**, PW Cigan, J Karst, GJ Pec, A Najjar, SW Simard, JF Cahill. Mountain pine beetle outbreak and ectomycorrhizal fungi feedback: the ecology of recovery in beetle killed native pine forests. Western Forest Insect Work Conference. Santa Fe, New Mexico.
10. **N Erbilgin**, J Klutsch. Developing and applying monitoring tools to detect mountain pine beetle at low densities. Annual Mountain Pine Beetle Information Exchange Forum. Edmonton, Alberta.
11. **N Erbilgin**. Mountain pine beetle outbreak: What it is, why right now and what's for future? Probus Club of Central Edmonton. Alberta.

2014

12. **N Erbilgin**. How an outbreak beetle species can affect forest succession. Department of Biology. Pamukkale University, Denizli. Turkey
13. **N Erbilgin**. Mountain pine beetle outbreak and ectomycorrhizal fungi feedback: the ecology of recovery in beetle killed naive forests. Department of Entomology Seminar at the University of Wisconsin, Madison, Wisconsin.
14. **N Erbilgin**. How mountain pine beetle outbreak affects ectomycorrhizal fungi communities in lodgepole pine forests. Department of Entomology Seminar at the University of Minnesota, Twin Cities, Minnesota.
15. **N Erbilgin**, C Ma*, B Shan**, S Taft, A Najjar. Similarity of secondary compounds between ancestral and novel host plants promotes invasiveness of a herbivorous species in a naive host ecosystem. Gordon Research Conference on Plant Volatiles: Exploring the Plant Headspace: Functional Analysis and Emerging Applications. Venture, California.
16. **N Erbilgin**. Invasion dynamics of the mountain pine beetle in jack pine forests: roles of host secondary compounds and competition. 25th USDA Interagency Research Forum on Invasive Species. Annapolis, Maryland.

2013

17. **N Erbilgin**. Invasion dynamics of the mountain pine beetle in jack pine forests: role of tree chemistry and symbionts. Department Seminar. Depart Biology & Environmental Science, Concordia University College of Alberta, Edmonton, Alberta.

2012

18. **N Erbilgin**, I Lusebrink**, C Ma, C Andres, B Shan**, M Penzes, M Evenden. Mountain pine beetle-host tree interactions in Alberta (Part I) The tree – is jack pine a suitable host tree? The Canadian Institute of Forestry.
19. **N Erbilgin**. Biology, ecology and management of invasive insects. World University Network Workshop on "Invasive species under climate change: economic impacts". Edmonton, Alberta.
20. **N Erbilgin**. Ecology and management of emerging forest pest complexes. Departmental Seminar. Department of Renewable Resources, University of Alberta.

2011

21. **N Erbilgin**. Emerging threats in forest ecosystems and integration with chemical ecology. Invited Keynote speaker for "*Chemical Ecology in Forest Ecosystems*" Symposium. International Society of Chemical Ecology, Vancouver, BC.
22. **N Erbilgin**. Historical view of research in forest entomology: turning limitations and future directions into a potential research idea. North American Forest Insect Work Conference. Portland, Oregon, USA.
23. **N Erbilgin**. 30+ years of research on tree defense mechanisms: now what? North American Forest Insect Work Conference. Portland, Oregon, USA.

24. **N Erbilgin**, J Colgan. The role of plant defenses mediating interactions between an invasive insect and a community of native organisms in boreal forest. North American Forest Insect Work Conference. Portland, Oregon, USA.
25. **N Erbilgin**, I Lusebrink**, M Evenden. How does invasion of jack pine by mountain pine beetle affect jack pine defenses. North American Forest Insect Work Conference. Portland, Oregon, USA.

2010

26. **N Erbilgin**. A tribute to Dave Wood: An inspiration for a young scientist to develop a new research program in invasion biology. A Special Tribute to Dr. David L. Wood. Annual Entomological Society of America Meeting. San Diego, California, USA.
27. **N Erbilgin**. Role of drought in mediating mountain pine beetle-tree interactions: placing theory in practice. Canadian Forest Pest Management Forum. Gatineau, Quebec, Canada.
28. **N Erbilgin**. Does prescribed fire affect population dynamics of mountain pine beetle? 2010 Annual Forest Pest Management Forum. Edmonton, Alberta, Canada.
29. **N Erbilgin**. Plant growth or defense under different herbivory and environmental pressure. Biannual 20th National Biological Congress. Invited Keynote Speaker. Denizli, Turkey.
30. **N Erbilgin**. Invasion of jack pine boreal forest by mountain pine beetle: Role of secondary organisms in jack pine forest. Depart Bio & Environ. Norwegian Univ Life Sciences. Ås, Norway.
31. **N Erbilgin**. Modulators of plant compensatory growth in aspen seedlings: The role of frequency and intensity of herbivory and resources availability. Western Forest Insect Work Conference. Arizona, USA.
32. **N Erbilgin**. Role of international collaboration and research on dealing with exotic insects. Western Forest Insect Work Conference. Arizona, USA.

2009

33. **N Erbilgin**. A whole system approach to understand an insect invasion in naïve forests and habitats. Annual Entomological Society of America Meeting Program Symposium "What's New in Forest Entomology". Indiana, USA.
34. **N Erbilgin**. Mountain pine beetle outbreak: What it is, why right now and what's for future! Department Seminar. Depart Biology & Environmental Science, Concordia University College of Alberta, Edmonton, Alberta.
35. **N Erbilgin**. Does environment influence tree defenses against mountain pine beetle and its fungal associates? Linking chemical ecology to tree physiology and molecular biology in the face of climate change. Depart Bio & Environ. Norwegian Univ Life Sciences. Ås, Norway.
36. **N Erbilgin**. Current forest health-related research at the University of Alberta. Alberta/British Columbia Inter-provincial Forest Health Workshop. Canmore, Alberta.
37. **N Erbilgin**, B Økland, E Christiansen. Colony establishment and survival of the spruce bark beetle, *Ips typographus*, in North American spruce trees in Norway. Western Forest Insect Work Conference. Washington, USA.
38. **N Erbilgin**, NE Gillette, JN Webster, L Pederson, SR Mori, JD Stein, DR Owen, DL Wood. Protection of lodgepole pine forests from attacks by mountain pine beetle by areal application of verbenone in flake formulation. Western Forest Insect Work Conference. Washington, USA.

2008

39. **N Erbilgin**. Climate change and the eruption and spread of mountain pine beetle in jack pine forests in western Canada. Depart Bio & Environ. Norwegian Univ Life Sciences. Ås, Norway.
40. **N Erbilgin**. How symbioses between a pathogen and insects may influence the success of all involved? Department Seminar. Dept Biological Sciences, Univ Alberta, Edmonton, Alberta.

2007

41. **N Erbilgin.** Ecology and management of emerging forest pest complexes. Departmental Seminar. Depart Renewable Resources, Univ Alberta, Edmonton, Alberta.
42. **N Erbilgin,** N Gillette, JR Stein, DR Owen, S Mori, JN Webster, DL Wood. Efficacy of verbenone flakes for area-wide and individual tree protection from attack by mountain pine beetle in western North America. Annual American Chemical Society Meeting. Program Symposium on Sustainable Forest Pest Management. Illinois.
43. **N Erbilgin,** N Gillette, C Rudolph, S Mori, JD Stein, DL Wood. *Pityophthorus* spp. response to mixtures of pheromones and host/green leaf volatiles. Western Forest Insect Work Conference. Idaho.
44. **N Erbilgin,** N Gillette, JR Stein, DR Owen, S Mori, J Webster, D Schultz, L Pederson, DL Wood. Western Verbenone flakes protect lodgepole pine forests from attack by mountain pine beetle. Forest Insect Work Conference. Idaho.
45. **N Erbilgin.** Poisons or pastes: What are the modes of action of terpenes serving as conifer defense. Western Forest Insect Work Conference. Idaho.

2006

46. **N Erbilgin,** DL Wood, TR Gordon, AJ Storer. Phoresy rates and spore loads of an exotic pathogen, *Fusarium circinatum*, on native bark beetles induce resistance to *F. circinatum* in natural Monterey pine forests. California Forest Pest Council Meeting. California.
47. **N Erbilgin.** Investigations of insect-pathogen-tree interactions in new and old world forests. Department of Environmental and Forest Biology, State Univ New York, Syracuse, New York.
48. **N Erbilgin,** BA McPherson, P Bonello, DL Wood. New relationships among the sudden oak death pathogen, native bark and ambrosia beetles, and decay fungi colonizing oaks. Annual Exotic/Invasive Pests and Disease Research Workshop in California. California.
49. **N Erbilgin.** Managing forest resources by integrating knowledge learned from studies of insect-pathogen-tree interactions in new and old world forests. Depart Renewable Resources, Univ of Alberta, Edmonton, Canada.
50. **N Erbilgin,** N Gillette, S Mori, M Hansen, J Webster, JR Stein, DL Wood. Verbenone-releasing flakes protect whitebark pine from attack by mountain pine beetle. Greater Yellowstone Coordination Committee. Wyoming.
51. **N Erbilgin,** P Krokene, E Christiansen, G Zeneli, J Gershenson. Exogenous application of methyl jasmonate elicits defenses in Norway spruce and reduces host colonization by the bark beetle *Ips typographus*. North American Forest Insect Work Conference. North Carolina.
52. **N Erbilgin,** TR Gordon, AJ Storer, DL Wood. How symbioses between an invasive exotic pathogen and native bark beetles may influence the success of all involved? North American Forest Insect Work Conference. North Carolina.
53. **N Erbilgin.** Tree-partite interactions among insects-pathogen-tree in new and old world forests. Departmental Seminar. Depart Forestry. Univ of Wisconsin, Stevens Point, Wisconsin.
54. **N Erbilgin.** How to use the knowledge gained in plant-insect-pathogen interactions against the most serious insect pests of North American forests. Departmental Seminar. Division of Plant and Soil Sciences. West Virginia Univ. West Virginia.

2005

55. **N Erbilgin.** Understanding the complexity of interactions among plant, insect, pathogen may help us to manage forest resources. Departmental Seminar. Depart Entomology. Purdue Univ. Indiana.

56. **N Erbilgin**, TR Gordon, AJ Storer, DL Wood. Phoresy rates and spore loads of an exotic pathogen, *Fusarium circinatum*, on native bark beetle taxa in natural Monterey pine forests-implications for tree resistance. Exotic/Invasive Pests & Disease Research Workshop. California.
57. **N Erbilgin**, N Gillette, DL Wood. Geographic variation in semiochemical attraction, fungal associates and genetic diversity of *Dendroctonus valens* in North America and China: Implications to forest health. North Central Forest Pest Workshop. Wisconsin.
58. **N Erbilgin**, TR Gordon, DL Wood. Phoresy rates and spore loads of an exotic pathogen, *Fusarium circinatum*, on native phloeophagous and xylophagous beetle taxa in natural Monterey pine forests-implications for tree resistance. Annual Conifer Defenses Symposium. Germany.
59. **N Erbilgin**, P Krokene, E Christiansen, G Zeneli, J Gershenson. Methyl jasmonate-mediated induced plant resistance affects host selection processes of *Ips typographus* on Norway spruce, *Picea abies*. Western Forest Insect Work Conference. British Columbia, Canada.

2004

60. **N Erbilgin**, TR Gordon, DL Wood. Resistance of Monterey pines to the bark beetle-vectored pitch canker pathogen. Results from preliminary experiments. Conifer Defenses Symp. Norway.
61. **N Erbilgin**, TR Gordon, DL Wood. Colonization of cut branches of five coniferous hosts of the pitch canker fungus (*Fusarium circinatum*) by *Pityophthorus* spp. in Central, Coastal California. Western Forest Insect Work Conference. California.
62. **N Erbilgin**, TR Gordon, DL Wood. Updating integrated pest management systems for pitch canker: Known and potential insect vectors in California. California Pitch Canker Task Force. California.

2003

63. **N Erbilgin**, TR Gordon, DL Wood. Recent studies of the relationship of woodboring insects to the pitch canker pathogen (*Fusarium circinatum*) in coastal California. California Forest Pest Council Meeting. California.

2002

64. **N Erbilgin**, TR Gordon, DL Wood. Colonization of several coniferous hosts of the pitch canker fungus (*Fusarium circinatum*) by *Pityophthorus* spp. in Central, Coastal California. California Forest Pest Council Meeting. California.
65. **N Erbilgin**. Forest biodiversity and the future? Pacific Branch of Entomological Society of America. Nevada. 2002
66. **N Erbilgin**, KF Raffa. Dose-dependent synergism and inhibition of bark beetle responses to host monoterpenes. Western Forest Insect Work Conference. Montana.

2001

67. **N Erbilgin**, KF Raffa. Temporal and spatial interactions among root and stem insects, associated fungi and predators in declining red pine forests in Wisconsin. Departmental Seminar. Depart Entomology. Univ Wisconsin, Madison. Wisconsin, USA.

Oral Presentations (presented or contributed) (First author is presenter) (Graduate students are underlined, * designates undergraduate student, ** designates postdoctoral researcher)

2017

1. S Guevara-Rozo, G Classens, A Hussain, N Erbilgin. Comparison of nutrient and secondary compounds between live standing trees and bolts. Annual Entomological Society of Alberta Meeting. Lehbridge, AB.

2. S Zhao, **N Erbilgin**. Are the survival, growth, and defense of residual overstory lodgepole pine trees affected by post-mountain pine beetle stand conditions? North American Forest Ecology Workshop. Edmonton, Alberta.
3. R de la Mata**, **N Erbilgin**, BR Thomas. Genetic variation in drought resistance and in the lodgepole-jack pine hybrid complex. North American Forest Ecology Workshop. Edmonton, Alberta.
4. JG Klutsch, A Najjar, **N Erbilgin**. Native pathogen-induced changes in jack pine have cascading effects on the invasive mountain pine beetle and its interactions with resource-sharing insects. North American Forest Ecology Workshop. Edmonton, Alberta.
5. SS Kanekar, JA Cale**, JG Klutsch, N Ukrainetz, N Berger, A Cheniveerappan, **N Erbilgin**. The role of mycorrhizal fungi in constitutive and induced defenses of lodgepole pine. North American Forest Ecology Workshop. Edmonton, Alberta.
6. KF Raffa, P Bonello, S Cook, **N Erbilgin**, K Keefover-Ring, JG Klutsch, C Mason, C Villari, P Townsend. Defense syndromes of lodgepole and whitebark pines against mountain pine beetle - fungal complexes. Western Forest Insect Work Conference. Jackson, Wyoming.
7. JG Klutsch, **N Erbilgin**. Using a native plant-pathogen system as a model to investigate success of the invasive mountain pine beetle in jack pine. Western Forest Insect Work Conference. Jackson, Wyoming.
8. ES Vidal, JG Klutch, **N Erbilgin**, L Sampedro, R Zas. Response to multiple stressors in *Pinus pinaster* Ait.: conflicts between drought and herbivory stress with *Hylobius abietis*. Western Forest Insect Work Conference. Jackson, Wyoming.
9. S Guevara, G Classens*, A Hussain, JA Cale**, **N Erbilgin**. Effect of fungal symbionts in the development of mountain pine beetle (*Dendroctonus ponderosae*). 8th Annual Interdisciplinary Conference on Natural Resources, Environment, and Forestry Sciences for Students by Students (CONFORWest 2017). Canmore, Alberta.
10. F Wang, JA Cale**, **N Erbilgin**. Do interactions between fungal associates of two competing bark beetle species affect the development of the beetle in jack pine? 8th Annual Interdisciplinary Conference on Natural Resources, Environment, and Forestry Sciences for Students by Students (CONFORWest 2017). Canmore, Alberta.

2016

11. J Karst, GJ Pec, **N Erbilgin**, A Najjar, PW Cigan, DL Taylor, JEK Cooke, SW Simard, J Cahill. Belowground consequences of an insect outbreak and aboveground implications. "Characterizing above and below ground changes in forests aftermath of insect outbreaks". 2016 North American Forest Insect Work Conference. Washington, D.C. USA.
12. KF Raffa, P Bonello, S Cook, **N Erbilgin**, JG Klutsch, K Keefover-Ring, C Mason, C Villari, PA Townsend. Integrated analysis of pine defense systems as a foundation to understand and enhance resilience of conifer ecosystems. "Applied MPB ecology during severe outbreaks in high elevation pine systems". 2016 North American Forest Insect Work Conference. Washington, D.C. USA.
13. AJ Storer, DL Wood, TR Gordon, BA McPherson, **N Erbilgin**. Long term management of native Monterey pine (*Pinus radiata*) in the presence of pitch canker caused by the exotic fungus *Fusarium circinatum*. "Potentials for restoration after invasions by exotic forest pests: west". 2016 North American Forest Insect Work Conference. Washington, D.C. USA.
14. DW Goodsman, JS Goodsman, DW McKenney, VJ Lieffers, **N Erbilgin**. Too much of a good thing: landscape-scale facilitation eventually turns into competition between a lepidopteran defoliator and a bark beetle. "Arthropogenic Effects: Tree-mediated interactions among forest insects". 2016 North American Forest Insect Work Conference. Washington, D.C. USA.

2015

15. A Najar, N Isabel, JM LeBoldus, BR Thomas, **N Erbilgin**. Overlaying phenotypic, genotypic and metabolomics: a novel approach applied to the *Populus – Sphaerulina* pathosystem. Genetics of Tree-Parasite Interactions, Orléans, France.
16. JG Klutsch, A Najar, **N Erbilgin**. Impact of interactions among native biotic disturbances on range expansion of mountain pine beetle into novel host jack pine. Annual International Society of Chemical Ecology Meeting. Stockholm, Sweden.
17. E Macdonald, V Lieffers, **N Erbilgin**. Beyond Beetle – natural and facilitated pine regeneration after MPB attack. Foothills Research Institute Mountain Pine Beetle Information Exchange Forum. Edmonton, Alberta.
18. J Klutsch, **N Erbilgin**. Development of monitoring tools to detect mountain pine beetle at low densities at the edge of beetle expansion. Foothills Research Institute Mountain Pine Beetle Information Exchange Forum. Edmonton, Alberta.
19. J Karst, **N Erbilgin**, GJ Pec, PW Cigan, A Najar, SW Simard, JF Cahill, Jr. Ectomycorrhizal fungi mediate transgenerational cascades in beetle-killed pine forests. 8th International Conference on Mycorrhiza. Flagstaff, Arizona, USA.
20. G Ishangulyyeva, A Najar, J Curtis, **N Erbilgin**. Plant fatty acids influence brood development of mountain pine beetle and growth of its symbiotic fungus: implications of host suitability and colonization by an herbivorous insect. Annual International Society of Chemical Ecology Meeting. Stockholm, Sweden.
21. J Cahill, G Stotz, A Carrigy, M Dettlaff, Inderjit, **N Erbilgin**. *Bromus inermis* invasion in an Albertan Savanna: Soil feedbacks and local adaptation promote enhanced invasion. International Association for Vegetation Science. Brno, Czech Republic.
22. J Klutsch, **N Erbilgin**. Interactions between biotic and abiotic disturbances on host and range expansion of mountain pine beetle in novel jack pine forests. Western Forest Insect Work Conference. Santa Fe, New Mexico.

2014

23. J Klutsch, **N Erbilgin**. Interactions between biotic and abiotic disturbances on host and range expansion of mountain pine beetle in novel jack pine forests. International Union of Forest Research Organization–World Congress. Utah, USA.
24. C Tabacaru, **N Erbilgin**. Do prescribed fires cause mountain pine beetle outbreaks? International Union of Forest Research Organization–World Congress. Utah, USA.
25. C Tabacaru, **N Erbilgin**. Mountain pine beetles in post-burn lodgepole pine forests. Annual Foothills Research Institute–Mountain Pine Beetle Ecology Program Meeting. Edmonton, Alberta.
26. J Klutsch, **N Erbilgin**. Development of monitoring tools to detect MPB at low densities. Vanier Canada Graduate Scholarships in 2012, Alberta.

2013

27. A Najar, JM LeBoldus, BR Thomas, **N Erbilgin**. Alberta's Achilles heel: an investigation of the features of susceptibility of Albertan balsam poplar to *Septoria musiva*. 61st Western International Forest Disease Work Conference. October 7-11, 2013 Waterton Lakes National Park, Alberta, Canada.
28. **N Erbilgin**, C Ma*, B Shan**, A Najar. Chemical similarity between historical and novel host plants promotes range and host expansion of the mountain pine beetle in a naïve host ecosystem. IUFRO Conference on "Forest Insect Disturbance in Warming Environment". Banff, Alberta.
29. J Klutsch, **N Erbilgin**. Interactions between mountain pine beetles and woodborer beetles in jack pine are mediated by a plant pathogen. IUFRO Conference on "Forest Insect Disturbance in Warming Environment". Banff, Alberta.

30. C Tabacaru, **N Erbilgin**. Mountain pine beetles in post-burn lodgepole pine forests. IUFRO Conference on "Forest Insect Disturbance in Warming Environment". Banff, Alberta.
31. PW Cigan, J Karst**, J F Cahill, **N Erbilgin**. Tracking the timing, persistence, and interdependence of stand structural and soil properties in mountain pine beetle-killed forests. Annual Ecological Society of America Meeting. Minneapolis, MN.
32. J Karst, P Cigan, G Pec, R Treu, **N Erbilgin**, J Cooke, S Simard, JF Cahill. The importance of above and belowground linkages for recovery of beetle-killed forests. CBA/ABC 49th Annual Meeting and Conference: "Thinking Plants". June 1 to 5, 2013 - Kamloops, BC.

2012

33. CM Whitehouse, **N Erbilgin**, ML Evenden. Does pine host species affect mountain pine beetle flight activity? Joint Annual Meeting of the Entomological Societies of Canada and Alberta. Edmonton, Alberta.
34. AA Wick, S Pruss, JR Spence **N Erbilgin**. Beyond the host plant: habitat characteristics of the Mormon metalmark at two spatial scales. Joint Annual Meeting of the Entomological Societies of Canada and Alberta. Edmonton, Alberta. Ashley won the best student presentation award in the President's Prize Student Oral Presentation Competition in the Behaviour and Ecology section.
35. CA Tabacaru, J Park, **N Erbilgin**. Mountain pine beetles in post-burn lodgepole pine forests. Joint Annual Meeting of the Entomological Societies of Canada and Alberta. Edmonton, Alberta.
36. C Ma*, C Andres*, B Shan**, M Penzes*, I Lusebrink**, M Evenden, **N Erbilgin**. The influence of host jack pine and lodgepole pine species on the pheromone emission of mountain pine beetle. Joint Annual Meeting of the Entomological Societies of Canada and Alberta. Edmonton, Alberta.
37. J Therrien, A Adams**, C Currie, B Aukema, KF Raffa, **N Erbilgin**. Impact of bacteria-fungus-host tree interactions on mountain pine beetle reproduction. Joint Annual Meeting of the Entomological Societies of Canada and Alberta. Edmonton, Alberta.
38. J Klutsch, S Taft*, **N Erbilgin**. Effect of woodboring beetle activity on mountain pine beetle in jack pine mediated by tree pathogen. Joint Annual Meeting of the Entomological Societies of Canada and Alberta. Edmonton, Alberta.
39. PW Cigan, J Karst**, JC Cahill, **N Erbilgin**. Influence of mountain pine beetle infestation on litter and soil nutrient status in western Alberta, Canada. Joint Annual Meeting of the Entomological Societies of Canada and Alberta. Edmonton, Alberta.
40. ML Evenden, I Lusebrink**, J Sykes, C Whitehouse*, **N Erbilgin**. Mountain Pine Beetle-Host Tree Interactions in Alberta (Part II) The Beetle. The Canadian Institute of Forestry.
41. AA Wick, **N Erbilgin**, S Pruss, JR Spence. Predicting habitat characteristics for a threatened butterfly (*Apodemia mormo*) at two spatial scales at its northern range. Ecological Society of America. Portland, Oregon.
42. PW Cigan, G Pec, J Karst**, **N Erbilgin**, J Cooke, JC Cahill. Multiple effects of simulated mountain pine beetle disturbance on seedling growth of lodgepole pine and white spruce. Canadian Society of Plant Physiologist. Edmonton, Alberta.
43. J Karst**, P Cigan, G Pec, **N Erbilgin**, S Simard, J Cooke, JC Cahill. Seedling establishment following mountain pine beetle attack: facilitation by mycorrhizal fungi. Foothills Forest Research Institute – Mountain Pine Beetle Ecology Program Annual Symposium. Edmonton, Alberta.
44. PW Cigan, J Karst**, N Erbilgin, JC Cahill. Ecological change in the mountain pine beetle red-attack stage: impacts of pine litter quality and quantity on soil chemical properties. Foothills Forest Research Institute – Mountain Pine Beetle Ecology Program Annual Symposium. Edmonton, Alberta.

45. C Tabacaru, J Park, **N Erbilgin**. Mountain pine beetles in post-burn lodgepole pine forests. Foothills Forest Research Institute – Mountain Pine Beetle Ecology Program Annual Symposium. Edmonton, Alberta.
46. M Evenden, I Lusebrink**, **N Erbilgin**. Mountain pine beetle system genomics (Tria Project): role of drought in mediating interactions between different host trees and the mountain pine beetle. Foothills Forest Research Institute – Mountain Pine Beetle Ecology Program Annual Symposium. Edmonton, Alberta.
47. D Goodsmann, V Lieffers, **N Erbilgin**, S Landhäusser. Fertilization and thinning and their effects on vigour of lodgepole pine trees against mountain pine beetle attacks. Foothills Forest Research Institute – Mountain Pine Beetle Ecology Program Annual Symposium. Edmonton, Alberta.
48. PW Cigan, J Karst**, JC Cahill, **N Erbilgin**. Changes in the chemistry of pine litter and soils across mountain pine beetle attack stages: Consequences for seedling-mycorrhizal mutualisms. Western Forest Insect Work Conference, Pennington, BC.
49. J Ariss, **N Erbilgin**, A Adams**, K Raffa, C Currie, B Aukema. Bacteria-Fungus-Host Tree Interactions: Impacts on Mountain Pine Beetle Reproduction. Western Forest Insect Work Conference, Pennington, BC.
50. J Klutsch, **N Erbilgin**. Altered tree resistance affects interaction between a native pathogen and an invasive insect. CONFOR West 2012 – 3rd Annual Graduate Student Conference for Forestry and Environmental Sciences in Western North America. Jasper, Alberta, Canada.
51. AA Wick, S Pruss, J Spence, **N Erbilgin**. Habitat modeling for threatened butterfly. CONFOR West 2012 – 3rd Annual Graduate Student Conference for Forestry and Environmental Sciences in Western North America. Jasper, Alberta, Canada.
52. PW Cigan, J Karst**, J Cahill, **N Erbilgin**. Mountain pine beetle attacks increase litter deposition: consequences for soil chemistry. CONFOR West 2012 – 3rd Annual Graduate Student Conference for Forestry and Environmental Sciences in Western North America. Jasper, Alberta, Canada.

2011

53. I Lusebrink**, M Evenden, N Erbilgin. Chemical ecology of mountain pine beetle. Entomology Seminar. Department of Biological Sciences, Sci, Univ Alberta.
54. T Zhao, A-K Borg-Karlson, **N Erbilgin**, P Krokene. Conifer resistance reduces aggregation pheromones of spruce bark beetle. The 6th Asia-Pacific Association of Chemical Ecologists Conference - Chemical Ecology Future: Green Chemoecology in 21st Century. Beijing, China.
55. B Økland, O Skarpaas, **N Erbilgin**. Knockin' on heaven's door of Eurasia – will the forest pests be let in? IUFRO – Ecology and Management of Bark and Wood Boring Insects. Novel risks with bark and wood boring insects in broadleaved and conifer forests. Sopron, Hungary.
56. I Lusebrink**, M Evenden, **N Erbilgin**. How drought affects the mountain pine beetle and its host trees? Provincial Integrated Forest Pest Management Forum. Edmonton, AB.
57. Tabacaru C, J Park, **N Erbilgin**. Mountain pine beetles in post-fire environments. Provincial Integrated Forest Pest Management Forum. Edmonton, AB.
58. Al-Najar A, S Landhäusser, P Bonello, **N Erbilgin**. Diverting resources to switch on resistance: how trees protect themselves. Provincial Integrated Forest Pest Management Forum. Edmonton, AB.
59. J Ariss, A Adams**, C Currie, KF Raffa, BH Aukema, **N Erbilgin**. Mountain pine beetle: Allies and enemies. Provincial Integrated Forest Pest Management Forum. Edmonton, AB.
60. **N Erbilgin**, D Galvez, B Zhang. Plant compensatory growth in aspen seedlings: the role of frequency and intensity of herbivory and resource availability. 4th International Workshop on the Genetics of Host-Parasite Interactions in Forestry. Eugene, Oregon, USA.

61. I Lusebrink**, M Evenden, **N Erbilgin**. How drought affects the mountain pine beetle and its host trees? 14th Symposium on Insect-Plant Interactions. Wageningen, The Netherlands.
62. J Lazebnik, **N Erbilgin**. Can jack pine defoliation elicit airborne interplant communication? 14th Symposium on Insect-Plant Interactions. Wageningen, The Netherlands.
63. A Najjar, S Landhäusser, N Erbilgin. Aspen's life experience embedded in physiology: impact of carbohydrate and nutrients on plant chemistry and insect fitness. International Society of Chemical Ecology. Vancouver, BC.
64. I Lusebrink**, M Evenden, **N Erbilgin**. How drought affects the mountain pine beetle and its host trees? International Society of Chemical Ecology, Vancouver, BC.
65. B Økland, O Skarpaas, **N Erbilgin**. Bark and wood boring insects knocking on the door of new continents - can we stop them North American Forest Insect Work Conference. Portland, OR.
66. A Najjar, S Landhäusser, **N Erbilgin**. The super aspen seedling! How aspen's "life experience" is embedded in physiology. CONFOR West 2011 – 2nd Annual Graduate Student Conference for Forestry and Environmental Sciences in Western North America. Jasper, Alberta, Canada.
67. M Evenden, T Wist, I Lusebrink**, **N Erbilgin**. Chemical messaging and plant defense systems: mediating plant-insect interactions. International Society of Arboriculture, Prairie Chapter. Integrated Pest Management Workshop. Lethbridge, AB.
68. J Lazebnik, **N Erbilgin**. Listening pines: Does it help trees to hear their neighbours. CONFOR West 2011 – 2nd Annual Graduate Student Conference for Forestry and Environmental Sciences in Western North America. Jasper, Alberta, Canada.
69. J Ariss, A Adams**, BH Aukema, C Currie, KF Raffa, **N Erbilgin**. Mountain pine beetle: Allies and enemies. CONFOR West 2011 – 2nd Annual Graduate Student Conference for Forestry and Environmental Sciences in Western North America. Jasper, Alberta, Canada.

2010

70. BA McPherson, DL Wood, **N Erbilgin**, AJ Storer, P Svihra. Would the disease be called sudden oak death without ambrosia and bark beetle attacks? A Special Tribute to Dr. David L. Wood. Annual Entomological Society of America Meeting. San Diego, California, USA.
71. AS Adams**, CK Boone, SM Adams, J Bohlmann, CR Currie, **N Erbilgin**, BH Aukema, KF Raffa. Bacteria associated with the mountain pine beetle degrade components of tree defensive chemistry. Annual Entomological Society of America Meeting. San Diego, California, USA.
72. K Raffa, A Adams**, B Aukema, C Boone, C Currie, **N. Erbilgin** (Secondary authors are listed by alphabetical order). Bacterial symbionts of bark- and wood-boring insects: Microscale processes mediate macroscale outcomes. Annual Entomological Society of America Meeting Program Symposium "Insect Microbial Systems". San Diego, California, USA.
73. J Ariss, **N Erbilgin**, A Adams**, BH Aukema, C Currie, KF Raffa. Effects of bacteria, fungi, and their combinations on mountain pine beetle reproduction in lodgepole, jack, and lodgepole-jack hybrid pine trees. Western Forest Insect Work Conference. Arizona, USA.
74. C Tabacaru, **N Erbilgin**, J Park, D Perrakis. Playing with fire: the effect of prescribed burns on mountain pine beetle populations. Western Forest Insect Work Conference. Arizona, USA.
75. LJ Colgan, **N Erbilgin**. A potential hurdle for MPB spread in the boreal? The jack pine-mediated interaction between jack pine budworm and a MPB fungal associate. Western Forest Insect Work Conference. Arizona, USA.

76. LJ Colgan, **N Erbilgin**. The jack pine mediated relationship between hack pine budworm and a mountain pine beetle fungal associate. CONFOR West 2010 – 1st Annual Graduate Student Conference for Forestry and Environmental Sciences in Western North America. Harrison Hot Springs. British Columbia, Canada
77. I Lusebrink**, ML Evenden, **N Erbilgin**. Role of drought in mediating host tree defenses against mountain pine beetle. Annual Entomological Society of Canada. Vancouver, BC. Canada
78. N Gillette, L Min, JH Sun, M Wingfield, DR Owen, **N Erbilgin**. The boomerang project: *Dendroctonus valens* and its *Optiostomatoid* hitch-hikers. Western Forest Insect Work Conference. Arizona, USA.

2009

79. J Colgan, **N Erbilgin**. Investigating induced defence and the indirect interaction between jack pine budworm and a mountain pine beetle-associated fungal pathogen in jack pine seedlings. Entomological Society of Canada. Manitoba, Canada
80. J Colgan, **N Erbilgin**. Jack pine mediated interaction between jack pine budworm (*Choristoneura pinus pinus*) and a mountain pine beetle fungal associate (*Grosmannia clavigera*). 13th Alberta Annual Integrated Forest Pest Management Forum. Alberta, Canada.
81. D Goodsman, V Lieffers, S Landhäusser, C Wallis, N Erbilgin. Deconstructing lesion size in lodgepole pine trees inoculated with *Grosmannia clavigera*: The role of fungal growth, constitutive and inducible defences. 13th Alberta Annual Integrated Forest Pest Management Forum. Alberta, Canada.
82. D Goodsman, VJ Lieffers, **N Erbilgin**, SM Landhäusser. How fertilization and thinning change the vigour-defence relationship? North American Forest Ecology Workshop. Utah, USA.
83. **N Erbilgin**, I Lusebrink*, M Evenden, A Arango*, J Cooke. Does environment influence tree defenses against mountain pine beetle and its fungal associates? Linking chemical ecology to tree physiology and molecular biology in the face of climate change IUFRO-Integrated Control of Scolytid Bark Beetles/Population Dynamics of Forest Insects: Forest Insects and Environmental Change. WY, USA.
84. N Gillette, **N Erbilgin**, CJ Mehmel, L Pederson, M Hansen, S Mori, D Owen, DL Wood. Managing bark beetles in the face of climate change. IUFRO-Integrated Control of Scolytid Bark Beetles/Population Dynamics of Forest Insects: Forest Insects and Environmental Change. WY, USA.
85. H Lange, P Krokene, B Økland, **N Erbilgin**. Life cycle development of bark beetles under climate change. IUFRO-Integrated Control of Scolytid Bark Beetles/Population Dynamics of Forest Insects: Forest Insects and Environmental Change. WY, USA.
86. B Økland, **N Erbilgin**, E Christiansen, O Skarpaas. Predicting outcome of interspecific interactions between two major tree-killing bark beetle species on the same host species: Implications to biological invasion of naïve habitats by exotic bark beetles. World Conference on Biological Invasions and Ecosystem Functioning. Porto, Portugal.
87. B Økland, **N Erbilgin**, E Christiansen, O Skarpaas. Will major bark beetles become invasive and what would be the outcome? IUFRO- Tree Resistance to Insects. San Vito di Cadore, Italy.
88. I Lusebrink**, M Evenden, **N Erbilgin**. Monoterpene emission of pine seedlings subjected to different environmental and biological treatments. Alberta/British Columbia Inter-provincial Forest Health Workshop. Canmore, Alberta.
89. NE Gillette, JN Webster, DR Owen, **N Erbilgin**, C Mehmel, SR Mori, L Pederson, DL Wood. Sustainable area-wide bark beetle management using antiaggregation semiochemicals. Program Symposium "Chemical Ecology Based Pest Management: 50 Years After the First Pheromone Synthesis." Entomological Society of America-Pacific Branch Meeting. California, USA.
90. NE Gillette, **N Erbilgin**, JN Webster, DR Owen, C Mehmel, SR Mori, L Pederson, DL Wood. Verbenone flakes for control of mountain pine beetle in whitebark pine stands. Western Forest Insect Work Conference. Washington, USA.

91. N Gillette, L Min, JH Sun, M Wingfield, DR Owen, **N Erbilgin**. The boomerang project: *Dendroctonus valens* and its *Opiostomatoid* hitch-hikers. Western Forest Insect Work Conference. WA, USA.

2008

92. LJ Colgan, **N Erbilgin**. How do jack pine budworm and a mountain pine beetle fungal associate affect defense responses in jack pine? Department Seminar. Dept Bio Sci, Univ Alberta.
93. P Bonello, TR Gordon, DA Herms, DL Wood, **N Erbilgin**, D Cipolini. Trees as mediators of pathogen-insect interactions: The role of systemic induced resistance. (Invited oral presentation). International Congress of Entomology. South Africa.
94. P Krokene, E Christiansen, **N Erbilgin**. Deadly dosages: Tree killing as a life history in insect-fungal symbioses. (Invited oral presentation International Congress of Entomology. South Africa.
95. N Gillette, **N Erbilgin**, JN Webster, C Mehmel, M Hansen, L Pederson, SR Mori, GO Fiddler, JD Stein, DL Wood. Pheromone-releasing flakes for control of *Dendroctonus* spp. bark beetles. (Invited oral presentation). IUFRO: Recent Advances in Insect Science. South Africa.
96. P Krokene, **N Erbilgin**, E Christiansen. Induced plant defences interfere with pheromone communication in a tree-killing bark beetle. (Invited oral presentation). SEMIO-08: Semiochemicals in insect pest and disease vector management: the African perspective. Tanzania.

2007

97. QH Zhang, **N Erbilgin**, SJ Seybold. GC-EAD responses of four bark beetle species associated with Monterey pine trees to common host, non-host and bark beetle volatiles: Similarities and disparities. Entomological Society of America. California.
98. N Gillette, **N Erbilgin**, DR Owen, C Mehmel, M Hansen, L Pederson, F Uzoh, J Stein, DL Wood. New pheromone formulations provide effective area-wide control of bark beetles. Entomological Society of America. California.
99. G Zeneli, P Krokene, **N Erbilgin**, E Christiansen, J Gershenson. The power of alliances: multiple induced chemical defenses protect Norway spruce against a bark beetle species and its symbiotic fungus. Annual meeting of Phytochemical Society of Europe. Finland.
100. BA McPherson, **N Erbilgin**, DL Wood, AJ Storer, P Svihra, RB Standiford. Attraction of ambrosia and bark beetles (Coleoptera: Scolytidae) to coast live oaks (*Quercus agrifolia*) infected by *Phytophthora ramorum*. Ecological Society of America Meeting. California.
101. P Bonello, TR Gordon, DA. Herms, DL Wood, **N Erbilgin**. Nature and ecological implications of pathogen-induced systemic resistance in conifers. A novel hypothesis. (Invited oral presentation). IUFRO Conference on Root and Butt Rots. California.
102. BA McPherson, **N Erbilgin**, DL Wood, R Standiford, P Svihra, AJ Storer. Attraction of ambrosia and bark beetles to coast live oaks infected by *Phytophthora ramorum*. 3rd Sudden Oak Death Science Symposium. California.
103. N Gillette, **N Erbilgin**, DR. Owen, N Webster, JD Stein, S Mori, L Pederson, DL Wood. Verbenone flakes protect lodgepole pine forests from attack by mountain pine beetle. (Invited oral presentation). Western Forest Insect Work Conference. Idaho.

2006

104. DL Wood, R Silverstein, N Gillette, **N Erbilgin**. Pheromones, kairomones and allomones in Scolytidae: From discovery to application (Program Symposium). Entomological Society of America. Indiana.
105. BA McPherson, **N Erbilgin**, DL Wood, P Svihra, AJ Storer. The attraction of saprotrophic ambrosia and bark beetles (Coleoptera: Scolytidae) to coast live oaks (*Quercus agrifolia*) infected by *Phytophthora ramorum*. Entomological Society of America. Indiana.

106. DR Owen, N Gillette, **N Erbilgin**, N Webster, JD Stein, S Mori, M Hansen, G Fiddler, L Pederson, DL Wood. Efficacy of verbenone flakes for area-wide and individual tree protection from attack by mountain pine beetles. (Invited oral presentation). California Forest Pest Council Meeting. California.
107. BA McPherson, **N Erbilgin**, DL Wood. The role of ambrosia and bark beetles in sudden oak death. (Invited oral presentation). California Forest Pest Council Meeting. California.
108. P Krokene, **N Erbilgin**, E Christiansen. Induced defences in conifers against bark beetles and fungi. (Invited oral presentation). The 8th European Congress of Entomology. Turkey.
109. G Zeneli, E Christiansen, **N Erbilgin**, J Gershenson, P Krokene. Multiple attacks against multiple defences: Bark beetles and blue-stain fungi vs. terpenoids and phenolics in Norway spruce. 2006. Forstwissenschaftliche Tagung 2006 "Ökosystem Wald – Rohstoff Holz – Prinzip Nachhaltigkeit (Forest ecosystems-Wood raw materials-Sustainability Principles). Germany.
110. B Økland, N Bjørnstad, O Skarpaas, NC Stenseth, **N Erbilgin**. Spatiotemporal dynamics of introduced bark beetles: Implications to resource competition, invasion risk and management. International Union of Forest Research Organizations: Alien Invasive Species and International Trade. Poland.
111. **N Erbilgin**, DL Wood, TR. Gordon, AJ Storer. Interactions between an exotic pathogen and native beetles induce resistance in native Monterey pines Pacific Branch of Entomological Society of America, Hawai'i.
112. G Zeneli, J Gershenson, **N Erbilgin**, E Christiansen, P Krokene. Enemies at the gate: Terpenoids and defense against spruce bark beetle (*Ips typographus*). Association for Medicinal and Aromatic Plants from Southeast European Countries Conference. România.
113. N Gillette, S Mori, DR Owen, JD Stein, **N Erbilgin**, DL Wood, JN Webster, C Mehmel. New pheromone release systems: Aerial and ground applications for bark beetle control. Forest Vegetation Management Conference. California.

2005

114. **N Erbilgin**, DL Wood. Interactions between vectoring efficacy of insects and resistance of host trees to an exotic pathogen: A quantitative approach for determining host resistance. Multistate Research Committee (W-1187): Interactions among Bark Beetles Pathogens, and Conifers in North American Forests. Ohio.
115. B.A. McPherson, **N Erbilgin**, DL Wood. Interactions between oak-infesting bark beetles and sudden oak death pathogen. Multistate Research Committee (W-1187): Interactions among Bark Beetles Pathogens, and Conifers in North American Forests. Ohio.
116. P Krokene, **N Erbilgin**, E Christiansen. Methyl jasmonate interferes with host colonization and reproduction in the spruce bark beetle. (Invited oral presentation). Annual Conifer Defenses Symposium. Germany.
117. **N Erbilgin**, NE Gillette, JD Stein, DR Owen, R Campos, LD Merrill, KF Raffa, S Mori, DL Wood. Geographic variation in response of *Dendroctonus valens* to host volatiles of *Pinus* spp.: A holarctic perspective. International Society of Chemical Ecology Meeting. Washington, D.C.
118. NE Gillette, JD. Stein, **N Erbilgin**, DR Owen, DL Wood. Control of western pine beetle, *Dendroctonus brevicornis*, populations using aerially applied verbenone flakes. International Society of Chemical Ecology Meeting. Washington, D.C.
119. BA McPherson, **N Erbilgin**, DL Wood, P Svihra, AJ Storer, F Ockels, P Bonello. The influence of the introduced pathogen *Phytophthora ramorum* on saprotrophic beetle (Coleoptera: Scolytidae) host selection behavior. International Society of Chemical Ecology Meeting. Washington, D.C.
120. **N Erbilgin**, DL Wood, TR Gordon, AJ Storer. Phoresy rates and spore loads of an exotic pathogen, *Fusarium circinatum*, on native phloeophagous and xylophagous beetle taxa in natural Monterey pine

forests: Implications for evolving plant resistance. International Union of Forest Research Organizations on Bark Beetles. British Columbia, Canada.

121. **N Erbilgin**, AJ Storer, GR Owens, S Kirkpatrick, K Bischel, DL Wood, TR Gordon. Studies of phoresy of *Fusarium circinatum* on potential beetle vectors. Pacific Branch of Entomological Society of America. California.
122. BA McPherson, DL Wood, AJ Storer, P Svihra, **N Erbilgin**. Responses of scolytid beetles to coast live oaks infected with *Phytophthora ramorum*, cause of sudden oak death. Pacific Branch of Entomological Society of America. California.
123. BA McPherson, **N Erbilgin**, RB Standiford, DL Wood, P Svihra, AJ Storer. The response of saprotrophic beetles to coast live oaks infected with *Phytophthora ramorum*. Sudden Oak Death Symposium. California.
124. BA McPherson, **N Erbilgin**, RB Standiford, DL Wood, P Svihra, AJ Storer. The response of saprotrophic beetles to coast live oaks infected with *Phytophthora ramorum*. 1st Sudden Oak Death Symposium. California.
125. NE Gillette, **N Erbilgin**, DR Owen, JN Webster, DL Wood, JD Stein. Verbenone flakes protect ponderosa pines from attack by *Dendroctonus brevicomis*. (Invited oral presentation). Western Forest Insect Work Conference. British Columbia, Canada.

2004

126. **N Erbilgin**, DL Wood, AJ Storer, TR Gordon. Updating integrated pest management systems for pitch canker: Known and potential insect vectors. Annual Exotic/Invasive Pests and Disease Research Workshop. California.
127. P. Krokene, **N Erbilgin**, E Christiansen. Beetle-associated fungi and methyl jasmonate elicit tree defenses and interfere with host selection and colonization behaviours of the spruce bark beetle, *Ips typographus*. (Invited oral presentation). XXII International Congress of Entomology. Queensland, Australia.
128. N. E. Gillette, **N Erbilgin**, KF Raffa, GS Martinez, JD Stein, J Sun. Geographical variation in fungal associates and behavioral chemistry of *Dendroctonus valens*: What goes 'round comes' round? International Union of Forestry Research Organization Meeting on Forest Diversity and Resistance to Native and Exotic Pest Insects. New Zealand.
129. BA McPherson, DL Wood, AJ Storer, P Svihra, **N Erbilgin**. Updating the role of insects in sudden oak death in California. (Invited oral presentation). Western Forest Insect Work Conference. California.

2003

130. **N Erbilgin**, AJ Storer, DL Wood, TR Gordon. Colonization of cut branches of five coniferous hosts of the pitch canker fungus (*Fusarium circinatum*) by *Pityophthorus* spp. (Col: Scolytidae) in Central, Coastal California. Entomological Society of America. Ohio.
131. BA McPherson, DL Wood, AJ Storer, P Svihra, **N Erbilgin**. Ambrosia and bark beetles involved in sudden oak death. Entomological Society of America. Ohio.
132. **N Erbilgin**, NE Gillette, KF Raffa, GS Martinez, JD Stein, J Sun. Geographical variation in response by *Dendroctonus valens* to host volatiles in North America and China. International Union of Forestry Research Organization Meeting on Integrated Control of Bark Beetles. Blodgett Forest Research Station. California.
133. B. A. McPherson, D. L. Wood, A. J. Storer, R. B. Standiford, **N Erbilgin**. Ambrosia and bark beetle (Scolytidae) colonization of coast live oaks infected by *Phytophthora ramorum* (cause of sudden oak death) in California. International Union of Forestry Research Organization Meeting on Integrated Control of Bark Beetles. Blodgett Forest Research Station. California.

134. KF Raffa, BH Aukema, **N Erbilgin**, KD Klepzig, KF Wallin. Behind the bimodal curve: Can we understand and manage how bark beetles erupt from denizens of ephemeral habitats to landscape engineers. International Union of Forestry Research Organization Meeting on Integrated Control of Bark Beetles. Blodgett Forest Research Station. California.
135. **N Erbilgin**, DL Wood, AJ Storer, TR Gordon. Updating integrated pest management systems for pitch canker: Known and potential insect vectors. Annual Exotic/Invasive Pests and Diseases Research Program-Preliminary Workshop, University of California. California.
136. BA McPherson, DL Wood, AJ Storer, P Svihra, **N Erbilgin**. The relationship between insects and sudden oak death. (Invited oral presentation). California Forest Pest Council Meeting. California.
137. **N Erbilgin**, DL Wood. Characterize the roles of biotic and abiotic factors in predisposing trees to bark beetle attack and subsequent mortality. Multistate Research Committee Meeting (W-1187)-Interactions among Bark Beetles, Pathogens, and Conifers in North American Forests. Oregon.
138. BA McPherson, **N Erbilgin**, DL Wood. Interactions between sudden oak death pathogen and woodboring insects. Multistate Research Committee Meeting (W-1187)-Interactions Among Bark Beetles, Pathogens, and Conifers in North American Forests. Oregon.

2002

139. **N Erbilgin**, DL Dahlsten. Impact of generalist predators on an introduced parasitoid, a biological control agent for *Glycaspis brimblecombei*. Annual Entomological Society of America Meeting. Florida.
140. KF Raffa, **N Erbilgin**, KD Klepzig, KF Wallin. Variable responses of bark beetle populations to diverse spatial and temporal patterns of resource availability: Interactions among above-and below- ground biotic stresses, tree defenses, and host selection behavior. (Invited oral presentation). Entomological Society of America. Florida.
141. DL Dahlsten, DL Rowney, **N Erbilgin**, WJ Roltsch, WE Chaney, LR Costello, JA Downer, JN Kabashima, KL Robb, DA Shaw. Biological control of introduced red gum lerp psyllids in California. Psyllids Workshop. Mexico.

2001

142. **N Erbilgin**, KF Raffa. Characterize the roles of biotic and abiotic factors in predisposing trees to bark beetle attack and subsequent mortality. Multistate Research Committee Meeting (W-1187)-Interactions among Bark Beetles, Pathogens, and Conifers in North American Forests. Montana.
143. D Ganz, **N Erbilgin**, DL Dahlsten. Measure the effects of different fire intensities from prescribed fires on tree vigor and its susceptibility to bark beetle attack. Multistate Research Committee Meeting (W-187)-Interactions among Bark Beetles, Pathogens, and Conifers in North American Forests. Montana.
144. **N Erbilgin**, KF Raffa. Temporal and spatial interactions among root and stem insects, fungi, and predators in declining forests. Ecological Society of America Meeting. Wisconsin.
145. KF Raffa, BH Aukema, **N Erbilgin**, KF Hobson. Can chemical communication be cryptic? Adaptive responses of herbivores to natural enemies exploiting prey semiochemistry. Ecological Society of America Meeting. Wisconsin.

2000

146. **N Erbilgin**, KF Raffa. Effects of predators on the population dynamics and forest impact of the pine engraver, *Ips pini* (Col: Scolytidae). Joint Meeting: Entomological Society of America, Entomological Society of Canada & Societe d'Entomologie du Quebec. Montreal, Quebec.
147. **N Erbilgin**, KF Raffa. Association of bark beetle predators with healthy red pine stands. North Central Forest Pest Workshop. Wisconsin.

148. **N Erbilgin**, KF Raffa. Interactions among insect-host-natural enemy interactions. Implications to the population dynamics of bark beetles (Col: Scolytidae). North Central Branch of Entomological Society of America. Minnesota.

1999

149. **N Erbilgin**, KF Raffa. Predator responses to specific bark beetle pheromones are differentially mediated by host plant chirality. Entomological Society of America. Georgia.

Poster Presentations (First authors are presenters) (Graduate students are underlined, * designates undergraduate student, ** designates postdoctoral researcher)

2017

1. JC Rodriguez-Ramos, JL Beck, EG Fellrath, JA Cale**, SW Simard, JF Cahill, J Karst, **N Erbilgin**. Safeguarding pine forests against climate change-associated disturbance patterns: Using soil fungi to promote pine regeneration and resistance. North American Forest Ecology Workshop. Edmonton, Alberta.
2. A Hussain, **N Erbilgin**. Host defense: productivity and spread of mountain pine beetle in novel jack pine habitats. North American Forest Ecology Workshop. Edmonton, Alberta.
3. SS Kanekar, JA Cale**, JG Klutsch, N Ukrainetz, V Berger, A Cheniveerappan, **N Erbilgin**. The role of mycorrhizal fungi in constitutive and induced defenses of lodgepole pine. fRI Mountain Pine Beetle Ecology Research Forum. Edmonton, Alberta.
4. Wang, JA Cale**, N Erbilgin. Do interactions between fungal associates of two competing bark beetle species affect the development of the beetle in jack pine? fRI Mountain Pine Beetle Ecology Research Forum. Edmonton, Alberta.
5. S Guevara, G Classens*, A Hussain, JA Cale**, N Erbilgin. Effect of fungal symbionts in the development of mountain pine beetle (*Dendroctonus ponderosae*). fRI Mountain Pine Beetle Ecology Research Forum. Edmonton, Alberta.
6. JA Cale**, SW Simard, JF Cahill, J Karst, **N Erbilgin**. Soil fungi-mediated effects of forest disturbances on the production of defense-related chemicals in lodgepole pine. fRI Mountain Pine Beetle Ecology Research Forum. Edmonton, Alberta.
7. JC Rodriguez-Ramos, JA Cale**, SW Simard, JF Cahill, J Karst, **N Erbilgin**. Mycobiomes of boreal forest soils: characterizing and remediating fungal communities after disturbances. fRI Mountain Pine Beetle Ecology Research Forum. Edmonton, Alberta.
8. A Hussain, **N Erbilgin**. Assessing the susceptibility of jack pine (*Pinus banksiana*) as a host for mountain pine beetle (*Dendroctonus ponderosae*) and the role of soil resources in tree defenses. fRI Mountain Pine Beetle Ecology Research Forum. Edmonton, Alberta.
9. S Zhao, **N Erbilgin**. Are the survival, growth, and defense of residual overstory lodgepole pine trees affected by post-mountain pine beetle stand conditions? fRI Mountain Pine Beetle Ecology Research Forum. Edmonton, Alberta.
10. JG Klutsch, A Najjar, P Sherwood, P Bonello, JA Cale**, **N Erbilgin**. Dwarf mistletoe-induced defenses changes the direction of interaction between mountain pine beetle (*Dendroctonus ponderosae*) and resource-sharing woodboring beetles. fRI Mountain Pine Beetle Ecology Research Forum. Edmonton, Alberta.
11. JL Beck, JA Cale**, J Karst, JF Cahill, SW Simard, **N Erbilgin**. Impact of disturbance-altered fungal communities on lodgepole pine seedling performance and carbon allocation. fRI Mountain Pine Beetle Ecology Research Forum. Edmonton, Alberta. (Won the best student poster award)

2016

12. JG Klutsch, A Najar, P Sherwood, E Bonello, JA Cale**, **N Erbilgin**. Chemical defenses mediate interactions among native biotic disturbances and mountain pine beetle in the novel host jack pine in Canada. 2016 North American Forest Insect Work Conference. Washington, D.C.
13. JG Klutsch, JA Cale**, S Kanekar, **N Erbilgin**. Developing tools to detect and monitor low densities of mountain pine beetle at the edges of beetle expansion in western Canada. 2016 North American Forest Insect Work Conference. Washington, D.C.
14. JA Cale**, RM Collignon, JG Klutsch, SS Kanekar, A Hussain, **N Erbilgin**. Fungal volatiles mediate interspecific interactions among mountain pine beetle's (*Dendroctonus ponderosae*) fungal symbionts. 2016 North American Forest Insect Work Conference. Washington, D.C.
15. C Mader, **N Erbilgin**. Ecology and phenology of a resident Aphelinid wasp (*Coccophagus* sp.) and evaluation of its potential as a biocontrol agent of European elm scale (*Eriococcus spurius*). Alberta Chapter of the Wildlife Society. Edmonton, AB.

2015

16. A Carrigy, G Stotz, M Dettlaff, G Pec, Inderjit, **N Erbilgin**, JF Cahill. Bromus inermis growth and survival in a savannah system. Botany 2015 – Science and Plants for People. Edmonton, AB.

2014

17. PW Cigan, JD Karst**, AN Sywenky*, JF Cahill, Jr. **N Erbilgin**. Influence of a mountain pine beetle outbreak on nutrient cycling in a naïve-host ecosystem. Annual Foothills Research Institute-Mountain Pine Beetle Ecology Program Meeting. Edmonton, Alberta.

2013

18. G IshanKulieva, A Najar, J Klutsch, J Curtis, **N Erbilgin**. Role of host tree quality in mountain pine beetle biology. IUFRO Conference on "Forest Insect Disturbance in Warming Environment". Banff, Alberta.
19. S Taft, **N Erbilgin**. Geographic variation in jack pine (*Pinus banksiana*) chemistry and its effect on mountain pine beetle (*Dendroctonus ponderosae*) pheromone production IUFRO Conference on "Forest Insect Disturbance in Warming Environment". Banff, Alberta.
20. C Tabacaru, J Park, **N Erbilgin**. Mountain pine beetles in post-fire environments. Joint Annual Meeting of the Entomological Societies of Canada and Alberta. Edmonton, Alberta.
21. T Zhao, P Krokene, N Björklund, **N Erbilgin**, E Christiansen, B Långström, H Solheim, A-K Borg-Karlson. Fungal inoculation and methyl jasmonate application induce highly variable terpene accumulation in Norway spruce. Genetic Aspects of Adaptation and Migration: Forest Health, Wood Quality and Biomass Production. Riga, Latvia.

2012

22. C Tabacaru, J Park, **N Erbilgin**. Mountain pine beetles in post-fire environments. Joint Annual Meeting of the Entomological Societies of Canada and Alberta. Edmonton, Alberta.
23. T Zhao, P Krokene, N Björklund, **N Erbilgin**, E Christiansen, B Långström, H Solheim, A-K Borg-Karlson. Fungal inoculation and methyl jasmonate application induce highly variable terpene accumulation in Norway spruce. Genetic Aspects of Adaptation and Migration: Forest Health, Wood Quality and Biomass Production. Riga, Latvia.
24. I Lusebrink**, M Evenden, **N Erbilgin**. Effect of different environmental conditions on plant defenses mediating interactions between the mountain pine beetle and its host pine trees. 24th Annual International Congress of Entomology. Daegu, South Korea
25. J Klutsch, **N Erbilgin**. Altered tree resistance affects interaction between a native pathogen and an invasive insect. Western Forest Insect Work Conference. Pennington, BC.

26. PW Cigan, G Pec, J Karst, **N Erbilgin**, J Cooke, JC Cahill. Multiple effects of simulated mountain pine beetle disturbance on seedling growth of lodgepole pine and white spruce. Canadian Society of Plant Biologist Annual Meeting. Edmonton, AB.
27. CM Whitehouse, JP Skyes, **N Erbilgin**, ML Evenden. Flight activity and lipid content of *Dendroctonus ponderosae* in relation to sex and age. Western Forest Insect Work Conference, Pennington, BC.

2011

28. J Klutsch, **N Erbilgin**. Interactions of an invasive bark beetle with a native forest pathogen: range expansions of mountain pine beetle in jack pine forests and impact of dwarf mistletoe. Disease and Insect Resistance in Forest Trees. 4th International Workshop on the Genetics of Host-Parasite Interactions in Forestry. Eugene, Oregon, USA
29. **N Erbilgin**, LJ Colgan. Tree-Mediated interactions between the jack pine budworm and a mountain pine beetle fungal associate. Disease and Insect Resistance in Forest Trees. 4th International Workshop on the Genetics of Host-Parasite Interactions in Forestry. Eugene, Oregon, USA.
30. J Lazebnik, **N Erbilgin**. Can jack pine defoliation elicit airborne interplant communication? International Society of Chemical Ecology. Vancouver, BC.
31. I Lusebrink**, M Evenden, **N Erbilgin**. Effect of different environmental conditions on plant defenses mediating interactions between the Mountain Pine Beetle and its host pine trees. International Society of Chemical Ecology. Vancouver, BC.
32. T Zhao, A-K Borg-Karlson, **N Erbilgin**, P Krokene. Host resistance elicited by methyl jasmonate reduces emission of aggregation pheromones by the spruce bark beetle, *Ips typographus*. International Society of Chemical Ecology. Vancouver, BC.
33. J Ariss, **N Erbilgin**, A Adams, C Currie, KF Raffa, B Aukema. Mountain pine beetle: allies and enemies. North American Forest Insect Work Conference. Portland, OR.
34. D Goodsman, V Lieffers, **N Erbilgin**. Feeding a mountain pine beetle epidemic: The role of nutrition and carbohydrates in lodgepole pine. North American Forest Insect Work Conference. Portland, OR.
35. A Najar, S Landhäuser, **N Erbilgin**. Aspen's life experience embedded in physiology: impact of carbohydrate and nutrients on plant chemistry and insect fitness. North American Forest Insect Work Conference. Portland, OR.

2010

36. SM Adams, AS Adams**, **N Erbilgin**, CR Currie, B Aukema, KF Raffa. Bacterial communities associated with mountain pine beetles colonizing lodgepole pine and lodge pole-jack pine hybrids: A potential role in a climate-driven expansion into naïve hosts? Annual Entomological Society of America Meeting. San Diego, California, USA.
37. C Tabacaru, J Park, **N Erbilgin**. Burn severity affects mountain pine beetle colonization rates. Annual Entomological Society of Canada. Vancouver, BC. Canada
38. **N Erbilgin**. Interactions of two outbreak insect species in jack pine forest: Implications to the host and range expansion of the mountain pine beetle in the boreal forests of Canada. Alberta Innovates Technology Futures Research & Commercialization Summit. The Banff Centre, Banff, Alberta.
39. KF Raffa, CR Currie, AS Adams, **N Erbilgin**, BH Aukema. How do interactions among microbial symbionts affect the host and range expansions of an eruptive forest insect? Western Forest Insect Work Conference. Arizona, USA.
40. KF Raffa, CR Currie, AS Adams, **N Erbilgin**, BH Aukema. How do interactions among microbial symbionts affect the host and range expansions of an eruptive forest insect? US-Department of Agriculture - National

Institute of Food and Agriculture - Agriculture and Food Research Initiative. Annual Meeting. Washington, D.C. USA

41. I Lusebrink**, ML Evenden, **N Erbilgin**. Effect of drought on plant defenses mediating interactions between the mountain pine beetle and mature pine trees. 26th International Society of Chemical Ecology Meeting. Tours, France.
42. J Lazebnik, **N Erbilgin**. Can interplant communication prime jack pine against future attack? Effects of defoliation by jack pine budworm on neighbouring conspecific. 26th International Society of Chemical Ecology Meeting. Tours, France.

2009

43. **N Erbilgin**, B Økland, E Christiansen, O Skarpaas. Will major bark beetles become invasive and what would be the outcome? IUFRO-Integrated Control of Scolytid Bark Beetles/Population Dynamics of Forest Insects: Forest Insects and Environmental Change. Wyoming, USA.
44. I Lusebrink**, M Evenden, **N Erbilgin**. Monoterpene emission from mature pine trees subjected to different environmental conditions and treatments emulating mountain pine beetle attack. Entomological Society of Canada. Manitoba. Winnipeg.
45. **N Erbilgin**, BA McPherson, DL Wood, P Bonello. Fungi introduced by ambrosia beetles appear to accelerate mortality in *Phytophthora ramorum*-infected coast live oaks. Sudden Oak Death Symposium. California, USA.
46. NE Gillette, SR Mori, **N Erbilgin**, JD Stein, CJ Mehmel, EM Hansen, L Pederson & DL Wood. Semiochemical-releasing flakes protect conifers from bark beetles. The Sixth International IPM Symposium - Transcending Boundaries. Oregon.
47. NE Gillette, SR Mori, **N Erbilgin**, JD Stein, CJ Mehmel, EM Hansen, L Pederson & DL Wood. Application of semiochemical-releasing flakes for protecting conifer forests from bark beetles. Western Forest Insect Work Conference. Washington.
48. J Bohlmann, J Cooke, BH Aukema, C Breuil, D Coltman, B Cooke, **N Erbilgin**, M Evenden, R Hamelin, R Holt, D Huber, S Jones, C Keeling, M Marra, F Sperling. The tria project: Mountain pine beetle system genomics. 3rd Annual Arthropod Genomics Symposium. Kansas City, Missouri.

2008

49. **N Erbilgin**, P Bonello, BA McPherson, DL Wood. Diverse fungal species are introduced into *Phytophthora ramorum*-infected coast live oaks following bark and ambrosia beetles colonization in northern California. Western Forest Insect Work Conference. Colorado.

2007

50. **N Erbilgin**, JD Stein, R Acciavatti, N Gillette, DL Wood. Evaluating lures to detect siricids infesting conifers of the Sierra Nevada and the Allegheny Mountains: Potential for trapping *Sirex noctilio*. Forest Pest Management Forum. Ontario, Canada.
51. **N Erbilgin**, BA McPherson, P Bonello, DL Wood. Relationships among the sudden oak death pathogen, bark and ambrosia beetles, and fungi colonizing Coast Live Oaks in California. Forest Pest Management Forum. Ontario, Canada.
52. **N Erbilgin**, DL Wood, TR Gordon, AJ Storer, G Ritokova. Propagule load on insect vectors determines initial and subsequent infection rates of a host tree by an exotic fungal pathogen. Western Forest Insect Work Conference. Idaho.
53. **N Erbilgin**. K Kausrud, B Okland, O Skarpaas, NC Stenseth. Spatiotemporal dynamics of invasive bark beetles-modeling dispersal strategies. Western Forest Insect Work Conf. Idaho.

54. **N Erbilgin**, BA McPherson, P Bonello, DL Wood. New relationships among the sudden oak death pathogen, native bark and ambrosia beetles, and decay fungi colonizing oaks. 3rd Sudden Oak Death Science Symposium. California.
55. **N Erbilgin**, DL Wood, TR Gordon, AJ Storer, G Ritokova. Propagule load on insect vectors determines initial and subsequent infection rates of a host tree by an exotic fungal pathogen. Gordon Research Conference: Plant-Herbivore Interactions. California.
56. JD Stein, R Acciavatti, **N Erbilgin**. Conifer siricids of West Virginia: Seasonal abundance and response to semiochemicals. Annual USDA Interagency Research Forum on Invasive Species. Maryland.
57. **N Erbilgin**, JD Stein, R Acciavatti, C Rudolph, N Gillette, DL Wood. Evaluating potential lures to monitor presence of native woodwasp species in western and eastern US. Annual USDA Interagency Research Forum on Invasive Species. Maryland.
58. K Kausrud, B Okland, O Skarpaas, NC Stenseth, **N Erbilgin**. Spatiotemporal dynamics of invasive bark beetles-modeling dispersal strategies. Annual USDA Interagency Research Forum on Invasive Species. Maryland.

2006

59. **N Erbilgin**, TR Gordon, DL Wood. Evaluation of vector potential for five beetle species that carry the pitch canker pathogen, *Fusarium circinatum*. Annual Exotic/Invasive Pests and Disease Research Workshop in California. California.
60. NE Gillette, M Hansen, S Mori, J Webster, **N Erbilgin**, J. Stein. Verbenone-releasing flakes protect whitebark pine from attack by mountain pine beetle. North American Forest Insect Work Conference. North Carolina.
61. **N Erbilgin**, NE Gillette, S Mori, JD Stein, J Webster, D Owen, DL Wood. Efficacy of aerial application of verbenone flakes for tree protection from attack by mountain pine beetle. North American Forest Insect Work Conference. North Carolina.
62. JD Stein, R Acciavatti, **N Erbilgin**. Conifer woodwasps of West Virginia: Seasonal occurrence and response to semiochemicals. North American Forest Insect Work Conference. North Carolina.
63. BA McPherson, **N Erbilgin**, DL Wood, P Svihra, AJ Storer, RB Standiford. Attraction of ambrosia and bark beetles to coast live oaks (*Quercus agrifolia*) infected by *Phytophthora ramorum*. North American Forest Insect Work Conference. North Carolina.

2005

64. **N Erbilgin**, P Bonello, MA McPherson, DL Wood. New relationships among the sudden oak death pathogen, native bark and ambrosia beetles, and decay fungi colonizing North American Oaks. Exotic/Invasive Pests and Disease Research Workshop. California.
65. **N Erbilgin**, TR Gordon, DL Wood. Evaluation of vector potential of five beetles species that carry the pitch canker pathogen, *Fusarium circinatum*. Exotic/Invasive Pests and Disease Research Workshop. California.
66. B. Økland, **N Erbilgin**, P Krokene, AM Liebhold, ON Bjørnstad. Does the pattern of spatial synchrony differ between bark beetle outbreaks and forest Lepidoptera outbreaks? International Union of Forestry Research Org. Meet. Forest Insect Epidemics: Population Dynamics, Dispersal, and Ecosystem Impacts, University of Northern British Columbia. British Columbia, Canada.
67. BA McPherson, **N Erbilgin**, G Owens, DL Wood. Scolytid beetles trapped on *Phytophthora ramorum*-infected coast live oaks in California. Pacific Branch of Entomological Society of America. California.

2003

68. **N Erbilgin**, AJ Storer, DL Wood, TR Gordon. Colonization of cut branches of five coniferous hosts of the Pitch Canker Fungus (*Fusarium circinatum*) by *Pityophthorus* spp. in Central, Costal California. International Union of Forestry Research Organizations Meeting on Integrated Control of Bark Beetles, Blodgett Forest Research Station. California.

2002

69. K Alpigian, DL Dahlsten, DL Rowney, **N Erbilgin**. Effects of fire and fire surrogate treatments on leaf litter invertebrates: Initial results from a pre-treatment study in a western Sierra Nevada mixed conifer forest. Entomological Society of America. Florida.
70. DL Dahlsten, DL. Rowney, **N Erbilgin**, AB Lawson, WJ Roltsch, WE Chaney, LR Costello, JA Downer, JN Kabashima, KL Robb, DA Shaw. Biological control of introduced red gum lerp psyllids in California. Pacific Branch of Entomological Society of America. California.
71. K Alpigian, DL Dahlsten, DL Rowney, **N Erbilgin**. Effects of fire and fire surrogate treatments on leaf litter invertebrates: Results from a pre-treatment study in a western Sierra Nevada mixed conifer forest. Western Forest Insect Work Conference, Montana.

2001

72. DL Dahlsten, DL Rowney, **N Erbilgin**, AB Lawson, WJ Roltsch, WE Chaney, LR Costello, JA Downer, JN Kabashima, KL Robb, DA Shaw. Biological control of introduced red gum lerp psyllids in California. Entomological Society of America. California.

1998

73. **N Erbilgin**, KF Raffa. Behavioral responses to pheromones and kairomones by *Ips pini*, its major predators and other associated insects. North Central Forest Pest Workshop. Iowa.

COMMUNITY & OUTREACH

2017

1. I was interviewed by Zoe Todd from CBC News. The interview was published on Sept 13, 2017
2. I was interviewed by Peter Watts at The Alberta Morning News Program (630 CHED) about my mountain pine beetle research. The interview was broadcasted on Aug 10, 2017.
3. I was interviewed by Rod Kurtz at the CBC Radio's Radio Active about my mountain pine beetle research. The interview was broadcasted live on Aug 9, 2017.
4. I was interviewed by CTV about my mountain pine beetle research. The interview was broadcasted on evening news on Aug 9, 2017.
5. I was interviewed by Rob Csernyik from The Edmonton Journal about my mountain pine beetle research. The interview was published on evening news on Aug 9, 2017.

2016

6. I was interviewed by Peter Watts at The Alberta Morning News Program (630 CHED) about my most recent project ton how soil fungi are affected by various disturbances, including mountain pine beetle. The interview was broadcasted on March 26, 2016.
7. I was interviewed by (Kerry Klein from Valley Public Radio (NPR) Clovis, California) about managing mountain pine beetle with new SPLOT Verb technology.

2014

8. I was interviewed by **The Wildlife Society** about the recent range expansion of mountain pine beetle in jack pine forests. The interview was published the Society's Field Notes.

2013

9. My New Phytologist paper on mountain pine beetle-jack pine tree interactions has provoked so much media attention. It was interviewed by so many media outputs in November, including:

National

- a. Canadian Geographic (<http://www.canadiangeographic.ca/blog/posting.asp?ID=956>)
- b. CBC Radio 2 - Quirks & Quarks (<http://www.cbc.ca/quirks/episode/2013/11/30/november-30-2013/>)

Provincial

- a) Edmonton Journal
http://www.fpinfomart.ca/cnw/cnw_transaction.phpkey=mv|675311521|edjn|20131114|182493575
 - b) Calgary Herald
http://www.fpinfomart.ca/cnw/cnw_transaction.phpkey=mv|675311521|cahr|20131114|182492684
 - c) Edmonton Examiner. <http://www.edmontonexaminer.com/2013/11/20/researchers-at-the-university-of-alberta-research-pheromones-to-reduce-beetle-devastation-to-pine-forests>
 - d) The Daily Herald Tribune. <http://www.dailyheraldtribune.com/2013/11/20/u-of-a-bait-research-focused-on-getting-ahead-of-mountain-pine-beetle>
 - e) CTV-Alberta Primetime. <http://www.albertaprimetime.com/Stories.aspx?pd=5855>
 - f) Global TV Edmonton. <http://globalnews.ca/video/965970/pine-beetle-research>.
 - g) CBC Radio- Edmonton
<http://www.cbc.ca/player/AudioMobile/Alberta%20at20Noon/ID/2418628256/?cmp=rss>.
 - h) CBC Radio (Calgary)-Fran Racro
 - i) CHQR 770 (Calgary)-News Talk by Peter Watts
 - j) CHQR 770 (Edmonton)-News Talk by Allison Karch
 - k) CBC Radio's morning show in Yellowknife (live)
 - l) CHED 630 AM. <http://www.630ched.com/2013/11/13/new-ammo-in-the-fight-against-mountain-pine-beetles/>.
 - m) U of A The U of A Gateway. http://thegatewayonline.ca/article/view/beetle_sex.
 - n) Grande Prairie Herald Tribune. <http://www.dailyheraldtribune.com/2013/11/20/u-of-a-bait-research-focused-on-getting-ahead-of-mountain-pine-beetle>.
 - o) Metro Canada. <http://metronews.ca/news/edmonton/853991/university-of-alberta-researcher-readies-blow-against-pine-beetles/>.
10. Alberta Innovates Bio Solutions and Alberta Tree Improvement (ESRD) organized a roundtable discussion about forest pests and diseases in relations to climate change in Alberta. The immediate goal of this meeting is to highlight the challenges in this area, and identify research gaps and potential solutions, with a focus on coniferous species. The meeting took place on Nov 19 from 3:00 to 6:30
11. I appeared in the U of A Neighborhood Newsletter. It was published on April 15, 2013:
<http://www.industrymailout.com/Industry/View.aspx?id=439772&q=578598791&qz=a64809>
12. I was interviewed by Angela Kokott at 630CHED radio station (Edmonton) (AM640- Toronto, CHQR 770- Calgary) about mountain pine beetle on March 4, 2013. This radio program was sponsored by the University of Alberta as part of University's awareness campaign. The purpose is to raise visibility in markets where the U of A wants to enhance awareness of the U of A - such as Vancouver, Toronto and Ottawa. The campaign was intended to position the U of A as a leading research university in the minds of key influencers in political and business spheres. The creative was focused on telling stories that show the daring and transformative nature of the U of A under the banner of "What's Next." Stories about faculty, students, staff and alumni demonstrated a vision for the future and concrete actions towards

realizing that vision. It was broadcasted on March 24, from 11:00am-12:00pm in Toronto, March 31, 4:00pm-5:00pm in Edmonton.

13. Interview with Scaachi Koul. She works for The Loop, a news website formerly known as Sympatico and owned by Bell Media, a major media conglomerate. The interview was about invasion of naïve habitats by insects due to global climate warming. It was published on February 20, 2013 at <http://www.theloop.ca/news/all/you-ask/article/-/a/1615057/What-s-going-on-with-bugs>

2012

14. My student Jen Klutsch and I gave a public lecture on Mountain Pine Beetle at the Greystone Millennium Middle School in Stony Plain. About 100 5th grade students attended the lecture. Following lecture, Jen and I had a showcase.
15. I gave a presentation at the Faculty of Graduate Studies and Research- Professional Development Week. My presentation was about "Preparing your Scholarship Application - Research Description".
16. I was interviewed by Kit Koon from Omni TV – Alberta about why it is so difficult to contain mountain pine beetle damage in Alberta. The interview was broadcasted on June 22, 2012.
17. I was interviewed by the Edmonton Journal – a daily newspaper published in Alberta- by Dave Cooper on March 18, 2012 (Pub Date: March 19, 2012) about how the mountain pine beetle and the exotic white pine blister rust are effecting the whitebark pine ecosystem in Alberta. <http://www.edmontonjournal.com/technology/research+finds+beetles+fungus+endanger+iconic+pines/6322963/story.html>.
18. I was interviewed live by Dave Rutherford in the Rutherford Show – a live news talk radio show which airs throughout Alberta (Corus Entertainment – <http://www.corusent.com>). We discussed about the situation with the mountain pine beetle and the destruction of various pine species in North America and specifically Alberta. We examined the bigger picture of the pine destruction and what are the implications of beetle attacks. We focused on whether global warming is to blame for the beetle infestations and whether other tree species take over the habitat if these pines are devastated. (Interview Date: March 21, 2012).

2011

19. I gave live one-on-one interview at the Alberta Prime Time in CTV on November 29, 2011. The interview was about the latest press release from the Province of Alberta – Sustainable Resource Development on its fight against the mountain pine beetles in Alberta. It was broadcasted in all Alberta. The interview is available at: <http://www.albertaprimetime.com/Archived.aspx?pd=3065>.
20. The University of Alberta- Faculty of Graduate Studies & Research organized a meeting between the Graduate Scholarship Committee members and department graduate school administrators to answer questions specific to the NSERC competition and review. I prepared and presented a brief presentation to the department administrators and answered their questions about the selection process at the Graduate Scholarship Committee.

2010

21. I was interviewed by Doug Newman from Westlock News about the current status of the mountain pine beetle in Alberta. It was published on September 27, 2010.
22. I gave a short lecture (35 min) on "Tree-Insect Interactions" for the visiting 6th grade students from Delton Elementary School in Edmonton. This visit was part of the School Plot Program organized by the University of Alberta Senate. I received a letter from Chancellor Linda Hughes thanking me for my participation.

2009

23. I was interviewed by National CBC television about the current status of the mountain pine beetle in Alberta and what it means for the rest of the boreal forest in Canada. It was broadcasted in Edmonton and Calgary (Alberta) and Regina (Saskatchewan) on 6 o'clock news on July 14, 2009. I was also interviewed by Edmonton CTV on the same topic, but it was not broadcasted.
24. I was interviewed by Edmonton CBC TV, Edmonton City TV, Edmonton Global TV, Edmonton CTV, CBC Radio (Live, Wild Rose Country Program), and CHED Radio about my new funded project on the potential interaction between the mountain pine beetle and jack pine budworm in jack pine forests. All TV interviews were broadcasted at 6:00 o'clock news (except City TV at noon) on August 7, 2009. Radio interviews were broadcasted on August 7, 2009. I was also interviewed by newspapers, including the Univ Alberta - Express News (Pub Date: August 10, 2009), Grande Cache Mountaineer (Pub Date: August 12, 2009), Edson Leader (Pub Date: August 22, 2009), Hinton Parklander (Pub Date: August 24, 2009), The University of Alberta Academic newspaper Folio (Pub Date: August 21, 2009) and student newspaper Gateway (Pub Date: August 27, 2009).
25. I was interviewed by Athabasca Advocate on Sept 7, 2009 (Pub Date: September 28, 2009) and Mountain View Gazette on September 23, 2009 (Pub Date: September 24, 2009) about current issues related to the mountain pine beetle in Alberta.
26. I was interviewed by CBC Radio (French) on September 25, 2009 about current issues on the mountain pine beetle in Alberta. It was broadcasted on the same day.

2008

27. Univ of Alberta Career Centre– Invited Panelist for Career & Placement Services Workshop.
28. Contributed to the Univ Alberta- Depart Ren Res Summer School Program

2007

29. Invited to present before the visiting Chinese Academy of Forestry (CAF) delegation. Depart Renewable Resources. Univ Alberta.
30. Contributed to field trip at California Forest Pest Council Insect, Disease and Animal Damage Summer Field Meeting.
31. California Pitch Canker Task Force. Davis, California.
32. Served as a judge for Environmental Science, Policy and Management Graduate Student Research Symposium. College of Natural Resources. Univ of California, Berkeley.

2005

33. Contributed to field trip at North Central Forest Pest Workshop. La Crosse, Wisconsin.
34. The Cambria Land Trust "Annual Walk in Forest". Cambria, California.

2004

35. Master Gardener Advanced Training Workshop. Martinez, California.
36. University of California, Berkeley Open House.

2003

37. Interviewed by the National Public Radio on psyllid damage on eucalyptus.
38. Interviewed for San Francisco Chronicle article on psyllid damage on eucalyptus.

2002

39. Integrated Pest Management training for pest control agents. San Diego, California
40. Insect presentations for elementary school students in Berkeley, California

2001

41. Forest Pest and Disease Workshop. Wisconsin Department of Natural Resources. Madison, Wisconsin

42. Wisconsin-Dane County Insect Exhibition. Represented Depart Entomology, Univ Wisconsin, Madison.

1999

43. Depart of Entomology, University of Wisconsin, Madison Open House.

1996

44. Insect identification training for East Texas Boy Scout.

45. Presentation of insects and woodpeckers for various Texas elementary and high schools.

1994

46. Volunteer for Insect Expo for children. Entomological Society of America. Dallas, Texas.

INVITED SCIENTIST

1. Canadian Forest Service. Pacific Forestry Centre. Victoria, British Columbia. 2018
2. Swedish University of Agricultural Sciences. Southern Swedish Forest Research Center. Alnarp, Sweden. 2017
3. Czech University of Life Sciences Prague, Faculty of Forestry and Wood Sciences (CULS, FFWS). Prague. Czech Republic. 2017
4. Department of Biology, Pamukkale University. Denizli, Turkey. 2014
5. National Forest Pest Strategy: Mountain Pine Beetle Workshop In Edmonton/Hinton 2011
The intent of this workshop is to discuss current status, impacts, spread rates and management options related to mountain pine beetle. It involved discussion on management effectiveness and latest risk analysis. The workshop led to identify potential multi-agency management of mountain pine beetle and identified gaps and next steps on mountain pine beetle management in Alberta and Canada.
6. Norwegian Forest & Landscape Research Institute. Ås, Norway 2004-2010
7. Invited by USDA-APHIS to participate Emeral Ash Borer Res and Tech Review Meeting & Accelerated Research and Development Workshop. Pittsburgh, Pennsylvania 2005
8. USDA-Forest Service, Southern Research Station. Pineville, Louisiana 2002

SCIENTISTS VISITED MY LABORATORY

1. Aaron Adams. Departments of Entomology and Bacteriology. University of Wisconsin 2008
2. Chris Wallis. University of Northern British Columbia, Prince George, BC. 2009
3. Paul Krokene. Norwegian Forest & Landscape Research Institute. Ås, Norway 2009
4. Kenneth F Raffa. Department of Entomology, University of Wisconsin, Madison 2010
5. Joerg Bohlmann. Michael Smith Laboratories, University of British Columbia, Vancouver 2011
6. Heikki Nuorteva. Finnish Forest Research Institute (METLA). Vantaa, Finland 2011,2013
7. C Peter Constabel. University of Victoria. Victoria, BC. 2017

PROFESSIONAL SKILLS

1. Instrumental analysis: Gas Chromatography/Mass Spectrometry, Ultra Performance Liquid Chromatography, Thin Layer Chromatography.
2. Statistical Analysis: SAS programming, R-language
3. Computer Literacy: Microsoft office package, Photoshop, Illustrator, ArcView, Sigma Plot.

PROFESSIONAL SERVICES

Grants Reviewed

1. USDA-National Institute of Food and Agriculture – Small Business Innovation Research Program in Forests and Related Resources.
2. University of Alberta – Leadership Scholarship Selection Committee (2015). The Leadership Awards recognize incoming Entrance students who have demonstrated leadership skills and potential. I read and evaluated 44 applications and each application took about 5-10 min.
3. National Sciences and Engineering Research Council of Canada (NSERC) – Industrial Research & Development Fellowships College of Reviewers
4. NSERC – Collaborative Research & Development Grants
5. University of Alberta/Faculty of Agricultural, Life & Environmental Sciences – Teaching & Learning Enhancement Fund
6. NSERC – Discovery Grant Program
7. NSERC – Strategic Partnership Projects
8. Alberta Conservation Association – Grants in Biodiversity Program
9. British Columbia Forest Investment Account – Forest Science Program
10. MITACS Graduate Research Internship Proposal
11. USDA-FS: Ecol. Bio. & Manag. of Bark Beetles and Invasive For. Insects of Southern Conifers.
12. USDA-ARS CRIS Res Project Plan: Classical Biological Control of Insect Pests of Crops.
13. NSF: Division of Environmental Biology-Ecosystem Studies & Ecology Program
14. University of Northern Arizona – Mission Research Board in the School of Forestry
15. University of Nevada – College of Agriculture, Biotechnology and Natural Resources. McStennis Research Proposal.

Editorial

- | | |
|--|--------------|
| 1. Editor of Open Journal of Forestry | 2011-Present |
| 2. Editor of Journal of Insect Science | 2010-Present |
| Topic Editor of Journal of Insect Science | 2012-2014 |
| 3. Review Board in Tree Physiology | 2010-Present |
| 4. Eurasian Journal of Forest Science | 2012-Present |
| 5. Editorial Review Board of Frontiers in Ecology & Evolution, section Chemical Ecology. | 2014-Present |

Manuscripts Reviewed (Total 42 journals)

Acta Physiologiae Plantarum, Agriculture & Forest Entomology, **Annals of the Entomological Society of America**, AoB Plants, Arthropod-Plant Interactions, Biological Control, Biology Letters, The Canadian Entomologist, Conservation Biology, Ecological Entomology, **Ecology Letters**, **Ecoscience**, Ecosphere, Environmental Entomology, Environmental Management, **Environmental and Experimental Botany**, **Environmental Science & Technology**, European Journal of Entomology, Forest Ecology & Management, Forest Science, Forestry Chronicle, IForest – Biogeosciences & Forestry, Insects (Open Source), **Global Change Biology**, Insect Science, **Journal of Applied Ecology**, **Journal of Animal Ecology**, **Journal of Ecology**, Journal of Insect Science, Journal of Chemical Ecology, Journal of Economic Entomology, Journal of Entomological Science, Journal of Forestry, Journal of Insects, Journal of Insect Behavior, Journal of Insect Physiology, Journal of Plant Ecology, Journal of Forestry (Open Source), **Molecular Ecology**, **New**

Phytologist (Tansley Review), Oecologia, Pan-Pacific Entomologist, PeerJ, Planta, Plos One (Open Source), Population Ecology, Science of the Total Environment, Silva Fennica, Tree Physiology.

Moderator and Judge

1. Moderator: Resistance and resilience in forest ecosystems. Western Forest Insect Work Conference, Jackson, Wyoming. 2017
2. Moderator: Characterizing above and below ground changes in forests aftermath of insect outbreaks. North American Forest Insect Work Conference. Washington D.C. USA. 2016
3. Served as judge for student poster presentation competition. International Society of Chemical Ecology. Vancouver, British Columbia, Canada. 2011
4. Co-moderator: 30+ years of research on tree defense mechanisms: now what? North American Forest Insect Work Conference. Portland, Oregon, USA. 2011
5. Served as judge for student poster presentation competition. North American Forest Insect Work Conference. 2011
6. Served as judge for student presentation competition in Ecology. Annual Entomological Society of America Meeting. San Diego, California. 2010
7. Moderator: International research & collaborations. Western Forest Insect Work Conference. Flagstaff, Arizona. USA 2010
8. Moderator: Potential implications of international entomological research to North American forests. Western Forest Insect Work Conference. Spokane, Washington. 2009
9. Moderator: Roles of tree terpenes in modifying insect-plant interactions: implications to insect attraction and plant defenses. Western Forest Insect Work Conference. Boise, Idaho. 2007
10. Co-moderator: Insect-plant interactions. North American Forest Insect Work Conference. Asheville, North Carolina. 2006
11. Served as judge for student poster presentation competition. North American Forest Insect Work Conference. Asheville, North Carolina. 2006
12. Served as judge for both MS and Ph.D. students oral presentation competition. Pacific Branch of Entomological Society of America. Maui, Hawaii 2006
13. Moderated student paper presentation competition (Sec. Ca). Entomological Society of America, Cincinnati, Ohio 2003
14. Served as a head judge for student paper presentation competition (Sec. Ca). Entomological Society of America. Fort Lauderdale, Florida 2002
15. Served as a head judge for student poster presentation competition (Sec. Ca2). Entomological Society of America. San Diego, California 2001

PROFESSIONAL/SCIENTIFIC ORGANIZATIONS

1. Conifer Defenses Group
2. Entomological Society of America
3. International Society of Chemical Ecology
4. International Union of Forestry Research Organizations