

## **CURRICULUM VITAE**

**DAVID ROY CLEMENTS**

Assistant Dean, Faculty of Natural and Applied Sciences  
Professor of Biology & Environmental Studies  
Trinity Western University  
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### **EDUCATION**

PhD, Queen's University, Kingston, ON, Canada, 1991  
Subject: Integrated pest management in apple orchards

BSc, University of Western Ontario, London, ON, Canada, 1986  
Specialization: Ecology and Evolution; B.Sc. thesis subject: Weed ecology

### **EMPLOYMENT**

#### **Academic**

Professor of Biology and Environmental Studies, Trinity Western University, Langley, B.C., Canada, 1994-present.

Assistant Dean, Department of Geography and Environment  
Teach courses in plant biology and ecology  
Promoted to full professor in 2006

Currently: Faculty Associate, Department of Geography, University of British Columbia  
Formerly: Faculty Associate, Forest Science Department, University of British Columbia

### **RESEARCH INTERESTS**

Restoration ecology, plant ecology, weed science, invasive species ecology, agroecology, allelopathy, seed bank biology, watershed ecology, environmental ethics

### **SCHOLARLY, PROFESSIONAL, AND SERVICE ACTIVITIES**

#### **Graduate Examination Activities**

External examiner, two MSc candidates, Thompson Rivers University

#### **Thesis/Major Project/Major Essay Supervisions**

PhD supervisory committee, Faculty of Forestry, University of British Columbia

Two PhD committees, Faculty of Land and Food, University of British Columbia

Four M.Sc. supervisory committees, Faculty of Land and Food, University of British Columbia

MSc supervisor, Royal Roads University

Supervision, graduate students, University of Guelph, 1991-1994

### **NSERC USRA Research Supervisions**

Climate effects on aquatic regeneration and transport of knotweed rhizome and stem fragments. Undergraduate Student Research Award, Natural Sciences and Engineering Research Council of Canada (NSERC), Summer 2021

Simulating river conditions to test knotweed hydrochory. Undergraduate Student Research Award, Natural Sciences and Engineering Research Council of Canada (NSERC), Summer 2021

Seedling (*Reynoutria x bohemica*) Establishment Post Deposition from Various Aquatic Disturbances and Growth Stages. Undergraduate Student Research Award, Natural Sciences and Engineering Research Council of Canada (NSERC), Summer 2020

Transport, germination, and performance of hybrid knotweed seeds. Undergraduate Student Research Award, Natural Sciences and Engineering Research Council of Canada (NSERC), Summer 2019

Effects of red/far-red light ratio on hybrid knotweed seed germination and seedling growth. Undergraduate Student Research Award, Natural Sciences and Engineering Research Council of Canada (NSERC), Spring 2019

Critical habitat parameters for the northern red-legged frog in southwestern British Columbia, Undergraduate Student Research Award, Natural Sciences and Engineering Research Council of Canada (NSERC), Spring 2015

Fish population biology and ecophysiology in a freshwater lake invaded by cetrarchids, Undergraduate Student Research Award, Natural Sciences and Engineering Research Council of Canada (NSERC), Summer 2014

Evolution and ecology of purple loosestrife, Undergraduate Student Research Award, Natural Sciences and Engineering Research Council of Canada (NSERC), Summer 2009

### **Editorial Activities**

Associate Editor, *Invasive Plant Science and Management*, 2020 – present

Editorial Board, *Agronomy*, 2021-present.

Board of Editors, *Pacific Science*, 2007-present

Editorial board, *Weed Research*, 2007-2020

Member, Scientific Journals Committee, Agricultural Institute of Canada, 2008-2010

Associate Editor with responsibility for the Biology of Canadian Weeds Series, *Canadian Journal of Plant Science*, 2004-2009

Editorial Board, *Journal of Crop Improvement*, 2001-2010

### **Research Collaborations and Partnerships**

Sabbatical (2018) focused on research on *Mikania micrantha* genetics with the Graham Center for Agricultural Innovation and Charles Sturt University, Wagga Wagga, Australia in collaboration with Dr. Leslie Weston and supported by an Australian Endeavour Research Fellowship

Academic exchange with Yunnan Academy of Agricultural Sciences (China): Oct. 2010, Oct. 2011, Aug. 2012, Aug. 2014, Aug. 2015, Aug. 2016, June 2017. Seven 1 week trips as part of an international advisory group studying the invasive plant *Mikania micrantha* infesting crops and natural systems.

Sabbatical (2009-2010) focused on research in grassland systems on Salt Spring Island, BC and Whidbey Island, WA

Sabbatical (2000-2001) with Dr. C.J. Swanton at the Dept. of Plant Agriculture, University of Guelph, Guelph, ON and also with Dr. P.B. Cavers in the Dept. of Biology, University of Western Ontario, London, ON

Research associate (1991-1994) with Dr. C.J. Swanton, Dept, of Crop Science, University of Guelph. Conducted a variety of research efforts on various ecological approaches to integrated weed management. Assisted with a graduate course in plant ecology.

### **Consulting**

*Garry oak restoration guide* for the Garry oak ecosystems recovery team (GOERT, 2010) [\$6857 contract for editorial team, David R. Clements and Tracey Hooper]

*2<sup>nd</sup> contract*: \$2600 contract for editorial team, David R. Clements and Tracey Hooper] to complete the guide

SERDP (Strategic Environmental Research and Development Program, U.S. DoD) reviewer in 2013 [\$300 U.S. contract]

Assessments for Alberta Biodiversity Monitoring Institute

- Invasive Species Risk Assessment for *Ulex europaeus* in 2014 [\$300 contract]

Publications for CABI in 2009-2013 (Centre for Agricultural Bioscience International)

- Invasive Plant Species ISC datasheet for *Mikania scandens* [\$450 U.S. contract]
- Invasive Plant Species ISC datasheet for *Rumex acetosella* [\$500 U.S. contract]
- Invasive Plant Species ISC datasheet for *Rubus argutus* [\$450 U.S. contract]
- Invasive Plant Species ISC datasheet for *Passiflora suberosa* [\$450 U.S. contract]
- Invasive Plant Species ISC datasheet (supplement) for *Cinchona pubescens* [\$200 U.S. contract]
- Invasive Plant Species ISC datasheet (full review) for *Sida acuta* [\$350 U.S. contract]
- Invasive Plant Species ISC datasheet for *Typha latifolia* [\$450 U.S. contract]

### **Committee Memberships**

Trinity Western University

Undergraduate Academic Council Chair (2015-2021)

Ecological Stewardship Committee

### **Event Participation**

Local arrangements committee: Canadian Weed Science Society annual meeting, Vancouver, BC, 2022

Local arrangements co-chair: Canadian Weed Science Society annual meeting, Kelowna, BC, 2019

Local arrangements committee: Canadian Weed Science Society annual meeting, Vancouver, BC, 2014.

Program chair: Canadian Weed Science Society meeting, Victoria, BC, 2006

Local arrangements chair: American Scientific Affiliation meeting, Trinity Western University, Langley, BC, 2004

Chair 2<sup>nd</sup> Canadian conference for Christian environmental professionals, Trinity Western University, Langley, BC. Co-chairs John R. Wood (The King's University College) and Bruce Shelvey (TWU), 2000

### **Memberships in Scholarly/Research and Professional Societies**

A Rocha Canada-Christians in Conservation. Founding board member, 1996-2011

A Rocha Canada-Christians in Conservation. Science Advisory board member, 2010-present

American Scientific Affiliation/ Canadian Christian and Scientific Affiliation. Member.

Canadian Weed Science Society. Past-President; chair of Biology of Weeds committee, four years with the Awards committee; chair of Biology and Ecology section, 2015-2018

Weed Science Society of America. Endowment Committee, 2013-2017, Early Career Scientists Award Committee, 2017-2021

The Northwest Scientific Association

Soil and Water Conservation Society. Treasurer, BC chapter, 2004-2013.

Invasive Species Council of BC. Member, research and development committee, planning committee member for 2017 Research meeting in Kamloops, BC  
Plant Canada, board member, 2011-2020  
Research committee, Garry Oak Ecosystems Recovery Team  
Stakeholders group, Derek Double Day Arboretum, 2008-2012  
Langley Field Naturalists, 2010-2011. Board member.  
Langley Environmental Partners Society. Board of directors 2001-2009; Chair 2008-2009.  
Salmon River Enhancement Society. Board of directors, 1997-2010, 2014-2020

### **Awards and Honours**

Derby Reach Brae Island Partnership grant to research the Langley Bog (2021) \$3,100.80.

NSERC Alliance Grant, “Habitat suitability and climate modelling for predicting the risk of new invasive plants in Metro Vancouver” with Invasive Species council of Metro Vancouver, Metro Vancouver, BC Ministry of Agriculture. \$87,000, 2021-2022

City of Burnaby contract extension for research at the impact of climate change on invasive species. \$8400, 2020-2021.

SSHRC Grant, “Integrated Creative Practices (ICP) for Research Innovation and Mobilization.” P.I. Joshua Hale, co-applicants Dr. Kelly Arbeau TWU Assistant Professor of Psychology, and Dr. David Clements TWU Professor of Biology. \$55,523, 2020-2022

City of Burnaby contract to study climate change resilience in Burnaby’s Central Park. \$55,000, 2019-2020.

Australian Endeavour Research Fellowship Award, Genetics of *Mikania micrantha*. \$18,500 Australian dollars.

NSERC Discovery Development Grant, “Does ecotype variation in invasive species foster adaptation to local climates and ultimately to climate change?” \$20,000, 2017-2019.

Trinity Western University Provost’s Research Grant, Trinity Western University, “Changes in age structure and diet of invasive centrarchid fish populations under management by electrofishing” \$2355, 2016-2017

Langley Environmental Hero Award nominee, Langley, BC, 2015, 2013

Pacific Salmon Foundation \$2237 Invasive Fish Removal from McMillan Lake at TWU (2014-2015)

Canadian Weed Science Society Excellence in Weed Science recipient, 2014

Environment Canada Habitat Stewardship Program \$24,584 “Garry Oak Ecosystem Restoration and Rare Species Monitoring on Salt Spring Island” (2013-2014)

Environment Canada Habitat Stewardship Program \$39,300 “Garry oak ecosystem restoration” (2011-2012)

NSERC Discovery Grant. Restoration of Garry oak ecosystems. (2009-2010). \$17,000

LEPS Stewardship Volunteer of the Year Award Recipient 2009

Invasive Alien Species Partnership Program award (administered by Environment Canada): funding a symposium - Invasive plants: inventories, strategies and action. CWSS–SCM 2006 Symposium, Victoria, B.C. and the resulting publication (2006-2008). \$39,500

Okanagan Habitat Restoration Research Contract (c/o Dr. G.G.E. Scudder's NSERC): \$6,300

Graduate scholarship awarded by NSERC (1988-1989)

Clements, D.R. 1990. The apple rust mite, *Aculus schlechtendali* (Acari: Eriophyoidae): A beneficial pest. Entomological Society of Ontario, Sault Ste. Marie, Ont. abstract published in Proc. ent. Soc. Ont. 121:127-128. Won "President's Prize"

Gold Medal for top academic achievement in honors B.Sc. in Ecology and Evolution, 1986

## **TEACHING**

### **Undergraduate**

Trinity Western University

BIOL 212/312	Biology of Vascular Plants
BIOL 214/314	Biology of Non-Vascular Plants
BIOL 216/316	Plant Ecology
BIOL 318	Tropical Botany
BIOL 113/114	General Biology
BIOL 360	Invertebrate Zoology
BIOL 381	General Ecology
BIOL 390	Biology & Faith
BIOL 400	Directed Studies in Biology
BIOL 482	Applied Ecology
NATS 487, 490	Natural and Applied Science capstone course

GENV 374/375 Internship coordinator  
BIOL 409/410 or ENVS 409/410 Senior Thesis supervisor  
IDIS 400 (interdisciplinary) mentor

### **Other**

Au Sable Institute of Environmental Studies (Pacific Rim Campus, Whidby Island, WA)

5-week field courses:

Plant Ecology, 2002; 2004

Field Botany, 2008.

## **PUBLICATIONS AND OTHER SCHOLARLY OUTPUT**

### **Books**

Clements, D.R., Upadhyaya, M., Joshi, S., and Shrestha, A. 2021. Global Plant Invasions. Springer Nature Publishing. (accepted)

Upadhyaya, M., Clements, D.R. and Shrestha A. 2021. Persistence Strategies of Weeds. John Wiley & Sons Limited. (accepted)

Clements, D.R., Hooper, T.D., Martell, K., and Masson, C. (eds.). 2011. Restoring British Columbia's Garry Oak Ecosystems: Principles and Practices. Garry oak ecosystems recovery team. 520 pp. [http://www.goert.ca/gardeners\\_restoration/restoration.php](http://www.goert.ca/gardeners_restoration/restoration.php)

Clements, D. R. and Darbyshire, S. J. eds. 2007. Invasive plants: Inventories, strategies and action. Topics in Canadian Weed Science, Volume 5. Sainte Anne de Bellevue, Québec: Canadian Weed Science Society – Société canadienne de malherbologie. 165 pp.

Clements, D.R. and Shrestha, A. (eds.). 2004. New Dimensions in Agroecology. The Haworth Press, Binghamton, NY. 553 pp.

### **Book Chapters**

Brouwer H, Berkelaar E, Clements DR, Wood JR (2022) Canadian perspectives on Christianity and creation care. Part of a volume being edited by Mike Brownutt for Johns Hopkins University Press.

Clements DR, Upadhyaya MK, Joshi S, and Shrestha A (2021) Global plant invasions on the rise. In: Clements DR, Upadhyaya MK, Joshi S, Shrestha A. (eds.) Global plant invasions. Springer Nature. *In press*.

Rai R, Shrestha L, Joshi S, and Clements DR (2021) Biotic and economic impacts of plant invasions. In: Clements DR, Upadhyaya MK, Joshi S, Shrestha A. (eds.) Global plant invasions. Springer Nature. *In press*.

Shrestha A, Clements DR, and Upadhyaya MK (2021) Introduction. In: Upadhyaya, M., Clements, D.R. and Shrestha A. Persistence strategies of weeds. J. Wiley & Sons, Limited. *in press*.

Clements DR and DiTommaso A (2021) Climate change and the persistence of weeds. In: Upadhyaya, M., Clements, D.R. and Shrestha A. Persistence strategies of weeds. J. Wiley & Sons, Limited. *in press*.

Upadhaya MK, Clements DR, and Shrestha A (2021) Persistence strategies of weeds: Synopsis and the future. In: Upadhyaya, M., Clements, D.R. and Shrestha A. Persistence strategies of weeds. J. Wiley & Sons, Limited. *in press*.

Clements, D.R. 2017. Invasive weed species and their effects. Pp. 65-88 *in* Zimdahl, R. (ed). Integrated weed management for sustainable agriculture. Burleigh Dodds Science Publishing, Cambridge, UK.

DiTommaso A., Qin Z., and Clements D.R. 2014. Identifying climate change as a factor in the establishment and persistence of invasive weeds in agricultural crops. Pages 353-370 *in* Ziska, L. and Dukes, J.S. Invasive Species and Global Climate Change. CAB International.

Clements D.R., DiTommaso, A., and Hyvönen, T. 2014. Ecology and management of weeds in a changing climate. Pages 13-37 *in* Chauhan, B.S. and Mahajan, G. Recent Advances in Weed Management. Springer, Berlin. 411 pp.

Clements, D. R. and Atwood, L. B. 2012. Protecting ecosystems from underground invasions - Seed bank dynamics in a semi-arid shrub-steppe, Pages 393-416 *In: Diversity of Ecosystems*, Prof. Mahamane Ali (Ed.), ISBN: 978-953-51-0572-5, InTech, Available from: <http://www.intechopen.com/books/diversity-of-ecosystems/protecting-ecosystems-from-underground-invasions-seed-bank-dynamics-in-a-semi-arid-shrub-steppe>

Clements, D.R. and Scott, L. 2011. Weed invasion of the Montane Cordillera Ecozone. *In* Assessment of Species Diversity in the Montane Cordillera Ecozone. *Edited by* G.G.E. Scudder and I.M. Smith. Royal British Columbia Museum. Pages 1-29. [http://www.royalbcmuseum.bc.ca/Content\\_Files/Files/mce/weed\\_invasion.pdf](http://www.royalbcmuseum.bc.ca/Content_Files/Files/mce/weed_invasion.pdf)

Clements, D.R. and Swanton, C.J. 2001. Agriculture: healthy, sick or left in the waiting room? Pages 125-140 *in* Chesworth, W., Moss, M. R. and Thomas, V. G. (eds.) Malthus and the Third Millennium. Faculty of Environmental Sciences, University of Guelph, Guelph, ON.

Thistlewood, H.M.A., D.R. Clements, and R. Harmsen. 1996. Stigmaeidae. Pages 457-470 *in* Lindquist, E.E., M.W. Sabelis and J. Bruin (eds) Eriophyoid Mites – Their Biology, Natural Enemies and Control. World Crop Pests Vol. 6. Elsevier, Amsterdam.

### **Special journal issues**

Edited special issue in the journal *Agronomy* entitled "Implications of Climate Change for Weed Evolution and Herbicide Efficacy" (2021) consisting of 7 papers. [https://www.mdpi.com/journal/agronomy/special\\_issues/Chemical-Weed](https://www.mdpi.com/journal/agronomy/special_issues/Chemical-Weed)

### **Scientific Articles**



- Oeggerli et al. Light and red/far-red responses of Bohemian knotweed (*Reynoutria ×bohemica*) seed germination and seedling growth. *Inv. Plant Sci. Manag.* (*in prep*)
- Goncharova et al. Transport of Bohemian knotweed (*Reynoutria ×bohemica*) by water: biology and management implications. *Inv. Plant Sci. Manag.* (*in prep*)
- Anderson et al. Ontogenetic diet shift analysis of invasive largemouth bass (*Micropterus salmoides*) and pumpkinseed sunfish (*Lepomis gibbosus*) subject to an electrofishing management regime. (*in prep*)
- Goncharova et al. Transport of Bohemian knotweed (*Reynoutria ×bohemica*) by water: biology and management implications. *Inv. Plant Sci. Manag.* (*in prep*)
- Clements, DR, Janse van Rensburg M, Janmaat A, Jones V, Oeggerli V, Strelau MG, Weston LA, Shen, S. and Zhu, X. (2021) Leaf morphology variation in knotweed (*Reynoutria*) Species in Relation to Interspecific Hybridization. *Invasive Plant Science and Management* (*in prep*).
- Xu G, Shen S, Zhang Y, Clements DR, Yang S, Dong L, Zhang F, Li J (2021). Effects of various nitrogen regimes on the ability of rapeseed (*Brassica napus* L.) to suppress littleseed canarygrass (*Phalaris minor* Retz.). *Agronomy* (*submitted*).
- Ahmed HT, Francis A, Clements DR, Dyck E, Ross N, Upadhyaya MK, Hall LM, Martin SL (2021). Biology of Canadian Weeds XXX. *Capsella bursa-pastoris* (L.) Medik. *Canadian Journal of Plant Science* (*in press*)
- Shen S, Xu G, Li D, Yang S, Jin G, Liu S, Clements DR, Chen A, Zhang F, Wen L, Tao Q (2021) Adventitious roots support population expansion of the invasive plant *Mikania micrantha* Kunth. *Physiologia Plantarum*. <https://doi.org/10.1111/ppl.13487>
- Shen S, Xu G, Li D, Yang S, Jin G, Liu S, Clements DR, Chen A, Rao J, Wen L, Tao Q, Zhang S, Yang J, and Zhang F (2021) Potential use of *Helianthus tuberosus* to suppress the invasive alien plant *Ageratina adenophora* under different shade levels. *BMC Ecology and Evolution* **21**, 85. <https://doi.org/10.1186/s12862-021-01826-5>
- Clements DR, Jones VL (2021) Rapid evolution of invasive weeds under climate change: Present evidence and future research needs. *Frontiers in Agronomy* 3:10.
- Clements DR., Jones VL (2021). Ten ways that weed evolution defies human management efforts amidst a changing climate. *Agronomy* 11(2): 284.
- Kriticos DJ, Clements DR, and DiTommaso A (2020). Biology of Invasive Plants: a new series within *Invasive Plant Science and Management*. *Invasive Plant Science and Management*, 13(3), 115-119.
- Shen S, Xu G, Yang Y, Yu X, Li D, Yang S, Jin G, Liu S, Clements DR, Chen A, Zhang F (2020) Increased suppressive effect of *Ipomoea batatas* (sweet potato) on *Mikania micrantha*

(mile-a-minute) under high fertilization levels. *Management of Biological Invasions*, 11(3):560-575.

Xu G, Shen S, Zhang Y, Clements DR, Yang S, Li J, Dong L, Zhang F, Jin G, Gao Y (2019) Designing cropping systems to improve the management of the invasive weed *Phalaris minor* Retz. *Agronomy* 9(12), 809.

Shen S, Xu G, Li D, Jin G, Liu S, Clements DR, Yang Y, Rao J, Chen A, Zhang F, Zhu X (2019) *Ipomoea batatas* (sweet potato), a promising replacement control crop for the invasive alien plant *Ageratina adenophora* (Asteraceae) in China. *Management of Biological Invasions* 10(3): 559-572.

Shen S, Xu G, Li D, Jin G, Liu S, Clements DR, Yang Y, Rao J, Chen A, Zhang F, Zhu X, Weston LA (2019). Potential use of sweet potato (*Ipomoea batatas* (L.) Lam.) to suppress three invasive plant species in agroecosystems (*Ageratum conyzoides* L., *Bidens pilosa* L., and *Galinsoga parviflora* Cav.). *Agronomy*, 9(6), 318.

Abney CR, Balzer SW, Dueckman A, Baylis A, Clements DR. 2019. Early spring and early vanishing wetlands as harbingers of the future? The climate change trap for ephemeral-pond-breeding frogs such as the Northern Red-legged Frog (*Rana aurora*). *Northwest Science* 93(1), 52-65.

Clements DR, MD Day, V Oeggerli, S C Shen, L A Weston, G F Xu, F D Zhang & X Zhu. 2019. Site-specific management is crucial to control of a global weed, *Mikania micrantha*. *Weed Research* 59(3):155-169.

Xu G, Shen S, Zhang F, Zhang Y, Kato-Noguchi H, Clements DR. 2018. Relationship between allelopathic effects and functional traits of different allelopathic potential rice accessions at different growth stages. *Rice Science*. 25(1): 32-41.

Strelau M., Janse van Rensburg, Clements DR. 2018. Dose-response methodology for variant populations of Bohemian knotweed (*Reynoutria ×bohemica* Chrtek & Chrtková). *Can. J. Plant Sci.* 98(6): 1380-1383

Shen S, Xu G, Chen F, Clements DR, Gu X, Ji S, Zhang L, Yang H, Zhang F, Yin K, Zhang, H Li H, Wu D. 2018. Effects of *Aphidius gifuensis* release on insect community and diversity in tobacco fields of Yunnan Province, China. *Pakistan Journal of Biological Sciences* 21(6): 284-291.

Strelau, M., Clements, D.R., Webb, C., R. Prasad. 2018. The Biology of Canadian Weeds. 156. *Daphne laureola* L. *Can. J. Plant Sci.* 98(4): 947-958.

Strelau, M., Clements, D.R., Benner, J., R. Prasad. 2018. The Biology of Canadian Weeds. 157. *Hedera helix* L. and *Hedera hibernica* (G. Kirchn.) Bean *Can. J. Plant Sci.* 98(5): 1005-1022.

- Shen S, Xu G., Lia D., Clements D.R., Jin G., Liu S., Yanga Y., Chen A., Zhang F., Kato-Noguchi, H. 2018. Allelopathic potential of sweet potato (*Ipomoea batatas*) germplasm resources of Yunnan Province in southwest China. *Acta Ecologica Sinica* 38(6): 444-449.
- Shen S, Xu G, Clements DR, Jin G, Liu S, Yang Y, Chen A, Zhang F and Kato-Noguchi H 2018. Allelopathic effects of three sweet potato cultivars (*Ipomoea batatas*) on the invasive plant *Mikania micrantha*. *Pakistan Journal of Biological Sciences* 21(1):8-15.
- Young, S.L., Clements, D.R., DiTommaso A. 2017. Climate dynamics, invader fitness, and ecosystem resistance in an invasion-factor framework. *Invasive Plant Science and Management* 10(3):215-231.
- Shen S., Xu G., Li D., Clements, D.R., Jin G., Yin, X., Gao R., and Zhang, F. 2017. Occurrence and damage of invasive alien plants in Dehong Prefecture, western of Yunnan Province. *Acta Ecologica Sinica* 37(3):195-200.
- Shen, S., Xu, G., Li D., Clements, D.R., Zhang, F., Jin, G., Wu, J., Wei, P., Lin, S., Xue, D., 2017. Agrobiodiversity and in situ conservation in ethnic minority communities of Xishuangbanna in Yunnan Province, Southwest China. *Journal of Ethnobiology and Ethnomedicine* 13(1):28
- Linderholm A., Spencer D., Battista V., Frantz L., Barnett R., Fleischer R.C., James H.F., Duffy D., Sparks J.P., Clements D.R., Andersson L., Dobney K., Leonard J.A., Larson G. 2016. A novel *MC1R* allele for black coat colour reveals the Polynesian ancestry and hybridization patterns of Hawaiian feral pigs. *R. Soc. Open sci.* 3: 160304. <http://dx.doi.org/10.1098/rsos.160304>
- Day M.D., Clements D. R., Gile C., Shen S., Weston L.A., and Zhang, F. 2016. Biology and impacts of Pacific Island invasive species. 13. *Mikania micrantha*, mile-a-minute (Magnoliopsida: Asteraceae). *Pacific Sci.* 70(3): 257-285.
- Shaik RS, Zhu X, Clements DR, Weston LA (2016) Understanding invasion history and predicting invasive niches using genetic sequencing technology in Australia: case studies from Cucurbitaceae and Boraginaceae. *Conserv Physiol* 4(1): cow030; doi:10.1093/conphys/cow030.
- Shen Sh-C., Xu G.-F., Clements D.R., Jin G.-M., Yang, Y., Zhang F.-D., and Kato-Nuguchi H. 2016. Suppression of reproductive characteristics of the invasive plant *Mikania micrantha* by sweet potato competition. *BMC Ecology* 16:30 DOI 10.1186/s12898-016-0085-9
- Shen S., Xu G., Clements D.R., Jin G., Zhang F., Tao D., and Xu P. 2016. Competitive and allelopathic effects of wild rice accessions (*Oryza longistaminata*) at different growth stages. *Pakistan J. Biol. Sci.* 19(2):82-88.
- Clements, D.R., Larsen T., and Grenz, J. 2016. Knotweed management strategies in

North America with the advent of widespread hybrid Bohemian knotweed, regional differences, and the potential for biocontrol via the psyllid *Aphalara itadori* Shinji. *Invasive Plant Sci. Manag.* 9(1):60-70.

Gillies, S., Clements, D.R. and Grenz, J. 2016. Knotweed (*Fallopia* sp.) invasion of North America utilizes hybridization, epigenetics, seed dispersal (unexpectedly) and an arsenal of physiological tactics. *Invasive Plant Sci. Manag.* 9(1):71-80.

Gaire, R., Astley, C., Clements, D.R., Barga, M., and Upadhyaya M.K. 2015. The Biology of Canadian Weeds – Himalayan blackberry. *Can. J. Plant Sci.* 95(3): 557-570.

Shen, Sh-C., Xu G.-F., Clements D.R., Jin G.-M., Liu S. -F., Zhang F.-D., Yang, Y., Chen A.-D. and Kato-Noguchi H. 2015. Effects of invasive plant *Mikania micrantha* on plant community and diversity in farming systems. *Asian J. Plant Sci.* 14(1):27-33.

Shen S., Xu G., Clements, D.R., Chen A., Zhang, F., Jin G., and Kato-Noguchi, H. 2015. Suppression of the invasive plant mile-a-minute (*Mikania micrantha*) by local crop sweet potato (*Ipomoea batatas*) by means of higher growth rate and competition for soil nutrients. *BMC Ecology* 15:1-10. DOI 10.1186/s12898-014-0033-5

Kato-Noguchi H., Hamada N., and Clements D.R. 2015. Phytotoxicities of the invasive species *Plantago major* and non-invasive species *Plantago asiatica*. *Acta Physiologiae Plantarum* 37:60. DOI 10.1007/s11738-015-1794-y

Shen, Sh-C., Xu G.-F., Clements D. R., Jin G.-M., Liu S.-F., Chen A.-D., Zhang F.-D., and Kato-Noguchi H. 2014. Control of invasive plant mile-a-minute (*Mikania micrantha*) with the local crop sweet potato (*Ipomoea batatas*) and applications of the herbicide bentazon. *Asian J. Plant Sci.* 13(2):59-65.

Clements, D. R. 2013. Translocation of rare plant species to restore Garry oak ecosystems in western Canada: challenges and opportunities. *Botany* 91(5): 283-291.

Steensma K.M.M., Clements, D.R., Wood, J.R., Van Dragt, R., and Lowe, B. 2013. Stewarding the gift of land: Christian campuses as land management models. *Perspectives on Science and Christian Faith.* 65(2): 104-115.

Clements, D. R., and DiTommaso, A. 2012. Predicting weed invasion in Canada under climate change: evaluating evolutionary potential. *Can. J. Plant Sci.* 92: 1013-1020.

Darbyshire, S. J., Francis, A., DiTommaso, A. and Clements, D. R. 2012. The Biology of Canadian weeds. 150. *Erechtites hieraciifolius* (L.) Raf. ex DC. *Can. J. Plant Sci.* 92: 729-746.

Stopps, G. J., White, S. N., Clements, D. R. and Upadhyaya, M. K. 2011. The Biology of Canadian weeds. 149. *Rumex acetosella* L. *Can. J. Plant Sci.* 91: 1037-1052.

- Clements, D.R. and DiTommaso, A. 2011. Climate change and weed adaptation: can evolution of invasive plants lead to greater range expansion than forecasted? *Weed Res.* 51: 227-240.
- Francis, A., Darbyshire, S.J., Clements, D. R. and DiTommaso, A. 2011. The Biology of Canadian weeds. 146. *Lapsana communis* L. *Can. J. Plant Sci.* 91: 553-569.
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Clements, D.R., D.L. Benoit, S.D. Murphy and C.J. Swanton. 1996. Tillage effects on weed seed return and seedbank composition. *Weed Science* 44:314-322.

Saner, M.A., D.R. Clements, M.R. Hall, D.J. Doohan, C.W. Crompton. 1995. The biology of Canadian weeds 105. *Linaria vulgaris* L. *Canadian Journal of Plant Science* 75:525-537.

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Clements, D.R., S.F. Weise and C.J. Swanton. 1994. Integrated weed management and weed species diversity. *Phytoprotection* 75:1-18.

Swanton, C.J., D.R. Clements and D.A. Derksen. 1993. Weed succession under conservation tillage: A hierarchical framework for research and management. *Weed Technology* 7:286-297.

Clements, D.R. and R. Harmsen. 1993. Prey preferences of adult and immature *Zetzellia mali* Ewing (Acari: Stigmaeidae) and *Typhlodromus caudiglans* Schuster (Acari: Phytoseiidae). *Canadian Entomologist* 125:967-969.

Clements, D.R. and R. Harmsen. 1992. Stigmaeid-phytoseiid interactions and the impact of the natural enemy complex on plant inhabiting mites. *Experimental and Applied Acarology* 14:327-341.

Li, S.Y., D.R. Clements and R. Harmsen. 1992. The impact of low dose pyrethroid applications on the spotted tentiform leafminer, *Phyllonorycter blancardella* (Lepidoptera: Gracillariidae) and its parasitoids in an apple orchard. *Journal of Economic Entomology* 85:192-201.

Swanton, C.J., P.B. Cavers, D.R. Clements and M.J. Moore. 1992. Biology of Canadian Weeds 101. *Helianthus tuberosus* L. *Canadian Journal of Plant Science* 72:1367-1382.

Clements, D.R., R. Harmsen and P.J. Clements. 1991. A mechanistic simulation to complement an empirical transition matrix model of acarine population dynamics. *Ecological Modelling* 59:257-277.

Clements, D.R. and R. Harmsen. 1990. Predatory behavior and prey-stage preferences of stigmaeid and phytoseiid mites and their potential compatibility in biological control. *Canadian Entomologist* 122: 321-328.

Clements, D.R. and P.B. Cavers. 1990. Seasonal viability patterns and the role of incomplete seed development in the life history strategy of *Linaria vulgaris*. *Naturaliste canadienne*. 117:189-198.

### **Other Publications**

Clements, D.R. 2017. Seeking reconciliation one moment at a time. *Clarion Journal of Spirituality and Justice*  
[http://www.clarionjournal.com/clarion\\_journal\\_of\\_spirit/2017/10/seeking-reconciliation-one-moment-at-a-time-david-r-clements.html](http://www.clarionjournal.com/clarion_journal_of_spirit/2017/10/seeking-reconciliation-one-moment-at-a-time-david-r-clements.html)

Clements, D.R. 2011. Review of “Global Warming and the Risen Lord: Christian Discipleship and Climate Change by Jim Ball”. *Perspectives on Science and Christian Faith* 63:206-207.

Brown, P.D., D.A. Jordan, G. Jordan, D. Clements, K. VanderGugten, S. Steunenberg, T. Buhler, M. Ness, M. Paivinen, and D. Budi Ayu. 2011. Langley Bog Scientific Projects Report, 2008-2009. Trinity Western University Environmental Studies Research Report 012011. Trinity Western University, Langley, BC.

Clements, D.R. and Warners, D.P. 2006. “The Plants We Grow”, pages 57-62 In: Koetje, D.S. (ed) *Living the Good Life on God’s Good Earth*. Grand Rapids, MI: Faith Alive Christian Resources. 83 pp.

Shrestha, A., M.K. Upadhyaya, and D. Clements. 2006. Seeking solutions: Researchers shine a spotlight on alternative weed management tools. *American/Western Fruit Grower*. 12-14.

Upadhyaya, M.K., D. Clements and R. Cranston. 2003. Purple Loosestrife: Don’t Let This Beauty Fool You. *Agri-Digest* September/October, p. 25.

Cavers, P. B., Warwick, S. I. and Clements, D. R. 2003. The biology of Canadian weeds. Revised instructions and format, updated lists of accounts published and in preparation. *Canadian Journal of Plant Science* 83: 661-665.

Graham, P. 2003. Invasive plants of southwestern British Columbia.  
<http://www.shim.bc.ca/invasivespecies/title.htm> (D.R. Clements, editor).

### **Invited Presentations**

Clements DR. 2021. Global plant invasions on the rise. The 5th Symposium on Exchange and Cooperation to Enhance Innovation for Agricultural Science and Technology in South & Southeast Asia. Kunming, Yunnan, China. Sept. 28-29, 2021. [invited talk]

Clements, D.R. 2021. Global plant invasions on the rise. Invasive alien species in the Hindu Kush Himalaya: Setting management targets for the next decade, ICIMOD (International Centre



for Integrated Mountain Development). Kathmandu, Nepal, September 29-30, 2021. [invited talk]

Clements DR. 2020. Surprisingly rapid evolution of weed species under climate change as a challenge to crop production. Forum on Ecological and Green Development & the 4th Symposium on Exchange and Cooperation to Enhance Innovation for Agricultural Science and Technology in South & Southeast Asia. Kunming, Yunnan, China. Sept. 22, 2020. [invited talk]

Clements DR. 2020. Hawaiian invasions as a call for help for invasions throughout the Pacific Islands – What hope is there for the future of island ecosystems? Weed Science Society of America, Maui, HI, USA. [invited talk]

Clements DR, Jones VL, Marconato J, Gonzales EK, Oeggerli V, Brouwer J. 2020. Reducing invasive grass populations in Garry Oak Ecosystems over the long-term via mowing or grazer exclusion. Weed Science Society of America, Maui, HI, USA. [invited talk]

Clements, D.R. 2020. Australia's mesmerizing mammals, implausible plants and absurd birds. Langley Field Naturalists, Langley, BC. [invited talk]

Clements, D.R. 2019. Will climate change hurt native organisms and help invasive species? Kanaka Education and Environmental Partnership Society AGM, Maple Ridge, BC. [invited talk]

Clements, D.R. 2019. Invasive plants on our doorstep: What a warmer and more extreme climate could bring to Metro Vancouver. Metro Vancouver Regional District Regional Planning Advisory Committee (RPAC) Regional Invasive Species Subcommittee, Burnaby, BC. [invited talk]

Clements, D.R. 2019. Invasive plants on our doorstep: What a warmer and more extreme climate could bring to British Columbia. Invasive Species council of British Columbia Annual Forum, Richmond, BC. [invited talk]

Clements, D.R. 2019. Knotweed hybridization, seed production and water - a bad combination? Quw'utsun (Cowichan) Heritage River Knotweed Symposium, Duncan, BC. [invited talk]

Clements, D.R. Shaik R., Zhu X., and L. A. Weston. 2018. What is a weed ecologist doing in a lab? – the value of molecular approaches for understanding plant invasions. Canadian Weed Science Society, Niagara Falls, ON. [invited talk]

Clements, D.R. 2018. Knotweed hybridization and seed production: what does it all mean? Invasive Species Council of Metro Vancouver, Burnaby, BC. [invited talk]

Clements, D.R. 2018. Slowing down the global weed mile-a-minute using site-specific management and genetics. HIE Seminar Series, Hawkesbury Institute for the Environment, Western Sydney University, Sydney, Australia. [invited talk]

Clements, D.R. 2017. Climate change: past, present, and future. Vancouver Parksfest, Burnaby, BC.

Clements, D.R. 2017. Ecological research and management of invasive alien plants (ecological management principles applied to *Mikania micrantha*). Training Workshop for Plant Protection Technology in South & Southeast Asia, organized by Yunnan Provincial Science and Technology Department, Yunnan Academy of Agricultural Sciences, and Agricultural Environment (YAAS) and Resources Research Institute, YAAS, Kunming, Yunnan, China. [invited talk]

Janse van Rensburg M\*, Strelau M\*, Clements DR. (2017). Leaf morphology variation in knotweed (*Fallopia*) species in relation to interspecific hybridization. Murdock College Science Research Program annual meeting, Spokane, WA, United States

Clements D.R. 2017. Climate Change, Extreme Events and Invasion. Western Society of Weed Science, Coeur d'Alene, Idaho. [invited talk]

Clements D.R. 2017. Knotweed research update. Invasive Species Council of British Columbia Forum, Richmond, BC. [invited talk].

Clements D.R. 2017. Extreme climate events and invasive plants. Invasive Species Council of British Columbia Forum, Richmond, BC. [invited "lightning talk"].

Clements D.R. 2016. Impacts of invasive plants: complex ecology, complex solutions. Symposium on Invasive Plant Control: Towards a Vegetation Management Plan for the Maplewood Conservation Area. Vancouver, BC. [invited talk]

Clements D.R.\* 2015. Weeds: masters of adaptation, ready-made for climate change. North American Invasive Species Management Association, Vancouver, BC. [invited talk]

Clements, D.R.\*, Abney C. and Guirr B. 2015. The story of the Blaauw Forest. South Coast Conservation Program workshop, Abbotsford, BC. [invited talk]

Clements, D.R. 2012. Translocation of rare plant species to restore Garry oak ecosystems in western Canada: challenges and opportunities. Botanical Society of America (Joint meeting with the Canadian Botanical Association), Columbus, OH. [invited talk]

Hall, L.M.\*, Beckie, H.J., Simard, M-J., Nurse, R.E. and Clements, D.R. 2011. New crops with new traits: are they weedy or invasive. Plant Canada, Halifax, NS. [invited talk]

Clements, D.R. 2011. Vulnerability of plant communities in coastal British Columbia to past and future environmental change. Plant Canada, Halifax, NS. [invited talk]

Clements, D.R.\* and DiTommaso, A.D. 2011. Predicting weed invasion of Canada under climate change: measuring evolutionary potential. Plant Canada, Halifax, NS. [invited talk]

Clements, D.R. 2009. Weed ecology in the antelope brush ecosystem. Pacific Regional Society of Soil Science Fall Field Trip, Oliver, BC. [invited talk]

Clements, D.R.\* and Gonzales, E.K. 2008. Restoration techniques for Garry oak meadows with abundant non-native grasses and herbivores. BC Invasive Plant Council Research Forum, Richmond, BC. [invited talk]

Clements, D.R. 2008. Invasive plant research in Western Canada: University Perspective. Manitoba Invasive Species Council Forum "BREAKING DOWN BORDERS: Issues and Actions for Invasive Plant Species in Western Canada." Winnipeg, Manitoba. [invited talk]

Gonzales, E.K. and Clements, D.R.\* 2007. Community response to two types of disturbance: Lessons for Garry oak ecosystem restoration. Plant Canada, Saskatoon, SK. [invited talk]

Clements, D.R.\* 2004. Adaptability of cropland weeds: the genetic route across the border. Weeds Across Borders (North American Weed Management Association), Minneapolis, MN [invited talk]

Clements, D.R.\* 2004. Invasive weeds of BC. BC Society of Landscape Architects, Vancouver, BC. [invited talk]

Clements, D.R.\* 2003. Invasive weeds of BC. Canadian Weed Science Society, Halifax, NS. [invited talk]

Participant, "Christian environmentalism with/out Boundaries," 3-week seminar, Calvin College, Grand Rapids, MI," 2003

Clements, D.R. and Shrestha, A.\* Oct., 2001. New dimensions in agroecology for developing a biological approach to crop production. Joint meeting of the Agronomy Society of America, the Soil Science Society of America and the Crop Science Society of America [invited talk]

Clements, D.R.\* and R. Harmsen. 1991. Interactions within the natural enemy complex of plant inhabiting mites. Symposium on Population Dynamics of Plant Inhabiting Mites, Amsterdam, The Netherlands. [invited talk]

Guest lecturer, IDIS 400 and NATS 487, Trinity Western

Guest lecturer, University of British Columbia

Guest lecturer, University of the Fraser Valley

## **Presentations**

(presenter(s) marked with an asterisk\*)

Merritt, H. and Clements, D.R. 2021. The impact of water saturation on regeneration rates in knotweed rhizome and stem fragments (*Reynoutria x bohemica*) post deposition. Invasive Council of British Columbia Research Conference. Oct 6-7, 2021.

Gonchorova, M., and Clements, D.R. 2021. Seedling (*Reynoutria x bohemica*) establishment post deposition from various aquatic disturbances and growth stages. Invasive Council of British Columbia Research Conference. Oct 6-7, 2021.

Clements, D.R., Cook, N.M., Jones, V.L., Oeggerli, V.V., and Jordan, G.J. 2021. Ecology and management of 14 invasive plant species in Burnaby, BC under climate change. Invasive Council of British Columbia Research Conference. Oct 6-7, 2021.

Jones, V., V. Oeggerli, N. Cook, J. Brouwer, D. Anderson, G. Jordan, D. Jordan, P. Brown, and D. Clements. 2021. Central Park Climate Change Resilience Project: The applicability of GIS. Western Division of the Canadian Association of Geographers (Virtual) Conference, Lethbridge, AB. March 6, 2021.

Oeggerli VV, Clements DR. 2021. Light and Red/Far-Red light responses of Bohemian Knotweed (*Reynoutria x bohemica*) seed germination and seedling growth. WSSA virtual conference.

Clements DR\*, Brouwer J, Goncharova M, Jones V, Jordan G, Oeggerli V. 2020. Knotweed goes with the flow. Invasive Species Council of British Columbia Annual Forum, Richmond, BC.

Jones V\*, Clements DR. 2019. Determining light requirements for Bohemian knotweed (*Reynoutria x bohemica*) seed germination. Canadian Weed Science Society, Kelowna, BC.

Oeggerli, V\*, Clements DR. 2019. Determining shade responses of Bohemian knotweed (*Reynoutria x bohemica*) seedlings. Canadian Weed Science Society, Kelowna, BC.

Anderson, D\*, Critchley R, Bae J, Clements DR. 2019. Effects of red/far-red light ratio on hybrid knotweed (*Reynoutria x bohemica*) seed germination and seedling growth. Canadian Weed Science Society, Kelowna, BC.

Goncharova M\*, Brouwer J, Clements DR. 2019. The effect of water disturbance on floatation, germination and survival of hybrid knotweed (*Reynoutria x bohemica*). Canadian Weed Science Society, Kelowna, BC.

Clements DR, Abney CR\*, Balzer SW, Dueckman A, Baylis A. 2018. Early spring and early vanishing wetlands as harbingers of the future? The climate change trap for ephemeral pond-breeding *Rana aurora*. Canadian Herpetological Society, Kamloops, BC.

Strelau MG, Clements DR\*, Janse Van Rensburg M, Bogress MJD 2017. Potential for glyphosate resistance in Bohemian knotweed (*Fallopia x bohemica*). Canadian Weed Science

Society, Saskatoon, SK.

Grenz, J.\*, Robertson, R., Clements, D.R. 2017. Effects of fire and herbivore exclusion fencing on native and non-native plant populations in a Garry Oak Ecosystem on Salt Spring Island in British Columbia: A role for deer grazing in novel ecosystem management? Invasive Species Research Conference: Turning Science Into Action, Invasive Species Council of British Columbia, Kamloops, BC.

Clements, D.R. 2017. Seeking reconciliation one moment at a time. A Sacramental Approach to Ecology, conference Organized by All Saints Monastery and Hosted by TWU Department of Geography and Environment and TWU Department of Philosophy Trinity Western University, Langley, BC.

Strelau, M.\*, Bogress, M., and Clements, D.R. 2017. Potential for glyphosate resistance in Bohemian knotweed (*Fallopia x bohemica*). Invasive Species Research Conference: Turning Science Into Action, Invasive Species Council of British Columbia, Kamloops, BC.

Roberts, D.\*, Clements, D.R. 2017. Changes in age structure and diet of invasive centrarchid fish populations under management by electrofishing. Invasive Species Research Conference: Turning Science Into Action, Invasive Species Council of British Columbia, Kamloops, BC.

Clements, D.R.\*, Marconato, J. and Gonzales, E.K. 2016. Community dynamics and management of invasive perennial grasses using mowing and prevention of grazing in Garry oak meadows over 7 years. Canadian Weed Science Society, Moncton, NB.

Hall L.\*, Alexander B.C., Beckie H.J., Clements D., Nurse R.E., Simard M.-J. 2015. Persistence and invasiveness of genetically modified canola in Canada: A demographic comparison of open pollinated and hybrid canola. Canadian Weed Science Society, Edmonton, AB.

Clements D.R.\* 2015. The story of the Blaauw Eco Forest (so far). Verge Conference, Trinity Western University, Langley, BC.

Clements D.R.\* and Weston L.A. 2015. Recent advances in genetic characterization of plant invasions: case studies from Cucurbitaceae and Boraginaceae. 13th International Conference: Ecology and Management of Alien Plant Invasions, Waikoloa, Hawaii.

Clements, D.R.\* and Prins, R. 2014. Fire may spark weed invasion instead of restoration. Canadian Weed Science Society, Montreal, QC.

Clements, D.R. 2014. Publishing in creation with illustrations from Garry oak ecosystem restoration in the Pacific Northwest. American Scientific Affiliation annual meeting, Hamilton, ON.

Rumley, J.\* and Clements, D.R. 2013. Restoration of Native *Camassia quamash* in Garry Oak Meadows. GOERT Seminar Series, Victoria, BC. [http://prezi.com/zvjmuwmgldd-/?utm\\_campaign=share&utm\\_medium=copy](http://prezi.com/zvjmuwmgldd-/?utm_campaign=share&utm_medium=copy)

Prins, R.\* and Clements, D.R. 2013. Restoration through regrowth: Fire as a conservation catalyst of Garry oak ecosystems? GOERT Seminar Series, Victoria, BC.

[http://prezi.com/hdp\\_52nln4ql/burned-plots/](http://prezi.com/hdp_52nln4ql/burned-plots/)

Clements, D.R. 2012. Predicting how far mile-a-minute (*Mikania micrantha* Kunth.) will invade. Canadian Weed Science Society Annual meeting, Winnipeg, Manitoba.

Alexander, B.C.\*, Beckie, H.J., Clements, D.R., Nurse, R.E., Simard, M-J., Hall, L.M. 2012. Quantifying the relative invasive potential of PNT using demographic analysis. Canadian Weed Science Society Annual meeting, Winnipeg, Manitoba.

Clements, D.R.\* and Shrestha, A. 2012. High tech and human pride versus the inexorable evolution of weeds. International Eco-theological (Ecothee) Symposium, Renew it. Do it. Green the Scene! Surrey, BC.

L.M. Hall\*, B. Alexander, H.J., Beckie, M-J. Simard, R.E. Nurse, D. Clements. 2012. Quantification of invasiveness in crops using demographic analysis. 12th International Symposium on Biosafety of Genetically Modified Organisms (ISBGMO12). St Louis, Missouri, USA (September).

Clements, D.R.\* and Gile, C. 2012. Mile-a-Minute Weed (*Mikania micrantha*) Infestations in the Indo-Pacific: Can We Put the Brakes on These Invasions? Weed Science Society of America, Kona, HI.

Clements, D.R.\* and Gile, C. 2011. Japanese knotweed (*Fallopia japonica* Houtt.): getting to the root of the problem. Canadian Weed Science Society, Niagara Falls, ON.

Methven, D.\* and Clements, D.R. 2011. Induction of condensed tannins in Garry oak (*Quercus garryana*) foliage. Garry oak ecosystem recovery team (GOERT) Research Colloquium, Victoria, BC [11 Feb. 2011].

Clements, D.R.\*, Luginbill, S., Jordan, D., Van Dragt, R. and Pelant, R. 2010. Techniques to promote Garry oak seedling survival in areas with high levels of herbivory and competition. Northwest Science Annual Meeting, Centralia, WA.

Methven, D.\* and Clements, D.R. 2010. Field studies of the larval biology of Propertius duskywing (*Erynnis propertius*). Garry oak ecosystem recovery team (GOERT) Research Colloquium, Victoria, BC [4 Mar. 2010].

Clements, D.R. 2010. Pacific islands invaded by pigs, plants and people: is paradise lost? Thompson Rivers University, Environmental Science Seminar Series, Kamloops, BC. [14 Jan. 2010].

Clements, D.R.\* and Steunenber, S. 2009. A tale of two cranberry species: native (*Vaccinium oxycoccus*) vs. non-native (*V. macrocarpon*). Canadian Weed Science Society, Charlottetown, Prince Edward Island.

Clements, D.R. 2008. Seed bank responses to restoration techniques in an invaded semi-desert plant community. Canadian Weed Science Society, Banff, AB.

Clements, D.R.\* and Carlson, G. 2008. Conservation science, doing right and walking humbly: An A Rocha perspective. American Scientific Affiliation, George Fox University, Newberg, Oregon.

Clements, D.R. 2007. Long-term strategies against invasive weeds: case study from Langley, BC. Canadian Weed Science Society, Mt. Tremblant, QC.

Steensma, K.M.M.\* and Clements, D.R.\* 2006. A Tale of Oaks, Salmon and Snails: Land Stewardship at Trinity Western University. American Scientific Affiliation, Calvin College, Grand Rapids, Michigan.

Roberts, K.\*, Koole, S. and Clements, D. 2006. Garry oak meadow restoration through Douglas-fir removal. Garry Oak Ecosystems Research Colloquium, Victoria, BC.

Newmaster, S. G.\*, S. Ragupathy, C. A. Lacroix, J. Levac, D. R. Clements, B. Booth, M. Irvine, F. W. Bell, M. Cowbrough and J. Alex. 2005. Invasive Alien Plants in Ontario. Popular Summary from Eastern Canadian Vegetation Management Associations Conference. October 4-6, Kingston, Ontario.

Shelvey, B.\* and D.R. Clements. 2005. Surviving in paradise: Keeping the image of the Kipahulu Valley pristine. American Society of Environmental History, Houston, TX.

Clements, D.R. 2005. Invasive species and ethical values: learning from the Hawaiian experience. Weed Science Society of America, Honolulu, HI.

Clements, D.R.\* and Corapi, W. V. 2004. Paradise lost? Setting the boundaries around weeds. American Scientific Affiliation, Langley, BC. [symposium talk]

Clements, D.R.\* and Corapi, W. 2002. Responsible stewardship: What about pigs? American Scientific Affiliation, Malibu, California.

Clements, D.R.\* July, 2001. Stewardship of creation: what about the weeds? American Scientific Affiliation, Manhattan, Kansas.

Swanton\*, C.J., Shrestha, A., Chandler, K., Clements, D.R. and Booth, B. July, 2001. Alternative weed management systems in a no-till corn-soybean-winter wheat rotation. Canadian Society of Agronomy, Guelph, ON.

Swanton\*, C.J., Shrestha, A., Chandler, K., Clements, D.R. and Booth, B. February, 2001. Agronomic and ecological evaluation of weed management systems in a no-till corn-soybean-winter wheat rotation. Weed Science Society of America, Greensboro, NC. [note, my name was added after submission of the abstract but was in the title slide of the presentation]

Clements, D.R.\* 2000. The war on biological invaders: Churchill's defiance or Chamberlain's complicity? Inheriting the Earth: Faith, Conflict and the Environmental Professional. 2<sup>nd</sup> in the series of Canadian conferences for Christian environmental professionals, held at Trinity Western University in Langley. I chaired the conference, along with John R. Wood (The King's University College) and Bruce Shelvey (TWU).

Clements, D.R.\* , Birch, B. and Snidal, T. 2000. Invasive characteristics of Himalayan balsam, *Impatiens glandulifera*. Weed Science Society of America annual meeting, Toronto, ON.

Jack Van Dyke\* and David R. Clements\*. 1999. Stewardship of Creation (Awakening Biophilia to Keep the Earth). Presentation to combined meeting of Christian teachers (NWCSI-CTABC), Lynden, Washington.

David R. Clements\* and Heather Robinson.\* 1999. The five C's of A Rocha. Workshop at "Stewardship of Creation" at St. John's Shaughnessy, Vancouver, BC.

Michael T. Irvine\*, Robert G. Wagner, David R. Clements and Clarence J. Swanton. 1998. Growth response of bareroot eastern white pine nursery stock to multi-species weed competition. 3<sup>rd</sup> International Symposium on Forest Vegetation Management, Sault Ste Marie, ON.

Clements, D.R.\* 1998. Preserving the back 40 at TWU. Sensitive Habitat Inventory Mapping Workshop, 1998. Capilano College, North Vancouver, B.C.

Clements, D.R.\* and P. Krannitz. 1998. Seed banks and disturbance dynamics in a dry grassland with antelope bitter-brush. Weed Science Society of America annual meeting, Chicago, Illinois

Clements, D.R.\* , L. Reedyk and P. Krannitz. 1996. Weed seedbanks in the Southern Okanagan Grassland. Expert Committee on Weeds national meeting, Victoria, B.C.

Clements, D.R.\* 1996. The underground world: Weeds lying in wait. Antelope-brush Ecosystem Symposium for the South Okanagan Grassland Conservation Project, Penticton, B.C.

Clements, D.R.\* , C.J. Swanton and D.L. Benoit. 1994. Seed return and seedbank dynamics of common lambsquarters (*Chenopodium album* L.) in four tillage systems. Weed Science Society of America annual meeting, St. Louis, Missouri

Clements, D.R.\* 1993. Integrating ecological theory into integrated weed management. Guest lecture to a graduate course at the University of Western Ontario, Dept. of Plant Sciences, London, Ontario.



Clements, D.R.\* 1993. Energy analysis of alternative weed management systems. IWM seminar, Guelph Legion, Guelph, Ontario.

Clements, D.R.\*, C.J. Swanton and S.F. Weise. 1993. Implications of increased weed diversity under integrated weed management. Weed Science Society of America annual meeting, Denver, Colorado

Clements, D.R.\* and R. Harmsen. 1992. Foraging strategy of *Zetzellia mali* (Acari: Stigmaeidae). Entomological Society of Ontario, Kingston, Ontario.

Clements, D.R. 1990. The apple rust mite, *Aculus schlechtendali* (Acari: Eriophyoidae): A beneficial pest. Entomological Society of Ontario, Sault Ste. Marie, Ont. abstract published in Proc. ent. Soc. Ont. 121:127-128. Won "President's Prize"

Clements, D.R. 1990. Population dynamics of phytoseiid-stigmaeid (Acarina) interactions. American Arachnological Society, Ottawa, ON.

Clements, D.R.\* and R. Harmsen. 1990. Predatory compatibility: An evaluation by system simulation. Entomological Society of Canada, Banff, AB.

Clements, D.R. 1990. Population implications of egg cannibalism. Ontario Ecological and Ethological Colloquium, Brock University, St. Catharines, ON.

Clements, D.R. 1989. The role of stigmaeids in the orchard acarine system. Entomological Society of Ontario, London, Ont. abstract published in Proc. ent. Soc. Ont. 120:74-75.

Clements, D.R.\* and R. Harmsen. 1989. The potential efficacy of phytoseiid and stigmaeid predators in integrated control of spider mites on apple. Ontario Pesticides Advisory Committee, Toronto, ON.

Clements, D.R.\* and R. Harmsen. 1988. Niche differentiation by two predatory mites. Ontario Ecological and Ethological Colloquium, U.W.O., London, ON.

Clements, D.R.\* and R. Harmsen. 1988. The development of an IPM module for the control of phytophagous mites in apple orchards. Ontario Pesticides Advisory Committee, Toronto, ON.

Clements, D.R.\* and P.B. Cavers. 1986. The seasonal pattern of seed viability in *Linaria vulgaris*. Ontario Ecological and Ethological Colloquium, York University, Toronto, ON.

## Posters

Anderson, D.D., and Clements, D.R. 2018. Characterization of a Wetland Ecosystem in Langley, British Columbia. Murdock College Science Research Program annual meeting, Vancouver, Washington. [poster]

Clements, D.R.\*, Marconato, J. and Gonzales, E.K. 2017. Community dynamics and management of invasive perennial grasses using mowing and prevention of grazing in Garry oak meadows over 7 years. Invasive Species Research Conference: Turning Science Into Action, Invasive Species Council of British Columbia, Kamloops, BC. [poster].

Marconato, J.\*, Jordan, G., and Clements, D. 2017. Using surface analysis to characterize slope and aspect of *Quercus garryana* research enclosures on Salt Spring Island, BC. Western Division, Canadian Association of Geographers, University of the Fraser Valley, Abbotsford, BC [poster]

Strelau, M.\*, Jordan, G., and Clements, D.R. 2017. Spatial relationships between anthropogenic trails and Daphne Laurel on Salt Spring Island, BC. Western Division, Canadian Association of Geographers, University of the Fraser Valley, Abbotsford, BC [poster]

Clements, D.R., Marconato, J.\* and Gonzales, E.K. 2017. Community dynamics and management of invasive perennial grasses using mowing and prevention of grazing in Garry oak meadows over 7 years. Invasive Species Council of British Columbia Forum, Richmond, BC. [poster].

Clements, D.R., Marconato, J.\* and Gonzales, E.K. 2016. Community dynamics and management of invasive perennial grasses using mowing and prevention of grazing in Garry oak meadows over 7 years. Murdock College Science Research Program annual meeting, Spokane, Washington. [poster]

Guthrie A.\*, Rumley J. and Clements D.R. 2015. Characterizing the effect of herbivory and competition on native *Camassia quamash* in Garry oak ecosystems. Murdock College Science Research Program annual meeting, Spokane, Washington. [poster]

Tung, A.\* and Clements, D.R. 2014. Age and size structure of invasive bass and sunfish populations sampled by electrofishing. Murdock College Science Research Program annual meeting, Vancouver, Washington. [poster]

Alexander B.\*, Raatz L., Beckie H., Clements D., Nurse R., Simard M.-J., and Hall L., 2014. Quantifying the relative invasive potential of genetically modified crops using demographic analysis. Canadian Weed Science Society / Weed Science Society of America meeting, Vancouver, BC. [poster]

Alexander, B.\*, Beckie, H., Clements, D., Nurse, R., Simard, M.-J., Hall, L. 2011. Validating demographic analysis as a method for predicting the invasive potential of plant species. Canadian Weed Science Society, Niagara Falls, ON. [poster]

Gile, C.\* and Clements, D.R. 2011. Effects of different control methods on the rhizomes of Japanese knotweed (*Fallopia japonica* Houtt.) Invasive Plant Council of BC Research Forum, Richmond, BC. [poster]

- Gile, C.\* and Clements, D.R. 2011. Effects of different control methods on the rhizomes of Japanese knotweed (*Fallopia japonica* Houtt.) Murdock Undergraduate Research Conference, Seattle University, Seattle, WA. [poster]
- Clements, D.R.\* and Steunenber, S. 2010. Competition between native (*Vaccinium oxycoccus*) and non-native (*V. macrocarpon*) cranberries in a *Sphagnum* bog. BC Invasive Plant Council Annual Forum, Richmond, BC.[poster]
- Methven, D.\* and Clements, D.R. 2009. The relationship between *Propertius* duskywing larvae and the Garry Oak Ecosystem. Murdock Undergraduate Research Conference, Spokane, WA. [poster]
- Clements, D.R.\*, Zhou A. and Brown, P.D. 2008. Invasive plant management from cradle to grave: management of decomposition of the annual *Impatiens glandulifera*. 5<sup>th</sup> International Weed Science Congress, Vancouver, BC. [poster]
- Clements, D.R. and Cavers, P.B. 2007. The biology of Canadian Weeds. Update on the series. Canadian Weed Science Society, Mt. Tremblant, QC. [poster]
- Campbell, K.R. and Clements, D.R. 2006. Investigation of allelopathic phenolics exuded from roots of *Verbesina encelioides*. Canadian Weed Science Society, Victoria, BC. [poster]
- Campbell, K.R.\* and Clements, D.R. 2006. Investigation of allelopathic phenolics exuded from roots of *Verbesina encelioides*. Murdock Pacific Northwest conference [poster]
- Clements, D.R.\*, Campbell, K., Becker, A., and Bainard, J.D. 2005. Phenotypic differences between a coastal and an interior population of purple loosestrife (*Lythrum salicaria* L.) in British Columbia. Canadian Weed Science Society, Niagara Falls, ON. [poster]
- Becker, A., Clements, D.R.\* and Kunstar, H. 2004. Optimal timing and control treatments for Scotch broom. Canadian Weed Science Society, Winnipeg, MT. [poster]
- Shriner, H. and Clements, D.R.\* 2003. Seedbanks, herbivory and N dispersion for Scotch broom (*Cytisus scoparius* L.). Canadian Weed Science Society, Halifax, NS [poster]
- Kunstar, H.C\* and Clements, D.R. 2003. Seed banks, propagation and solarization in grassland restoration with *Sporobolus cryptandrus*. Soil and Water Conservation Society, Spokane, WA. [poster]
- Clements, D.R.\* 2003. Knapweed seed banks in antelope brush. Society for Ecological Restoration Meeting (BC Chapter), Osoyoos, BC. [poster]
- Clements, D.R.\*, Vander Woude, J., and Johnson, J.L. 2002. Weed adaptability: Coastal vs. interior purple loosestrife. Canadian Weed Science Society, Saskatoon, SK. [poster]

Clements, D.R.,\* A. Carlile, K.M.M. Steensma, D. Kehler, B.G. Wernick and H. Schreier. 1997. Management of a healthy salmon stream (The Salmon River, Langley, B.C.) subject to increased urban and agricultural pressures. Soil and Water Conservation Society Annual Meeting, Toronto, ON. [poster]

Clements, D.R. \*, C.J. Swanton, S.F. Weise, R. Brown, D. Hume and P. Stonehouse. 1993. Energy efficiency of alternative weed management systems. Poster at Ontario Ministry of Environment and Energy Technology Transfer Conference, Toronto, Ontario. [poster]

### **Media**

Monthly column for the local paper called the *Green Beat*.