

## M. ALEX SMITH – CV

Department of Integrative Biology, University of Guelph, Guelph, Ontario, N1G 2W1  
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### EDUCATION

Degree	Years	Institution
Doctor of Philosophy	09/99-06/04	McGill University
Masters of Science	09/96-12/98	Trent University
Bachelor of Science (Honours)	09/92-05/96	Trent University

### CURRENT POSITION

Associate Professor, Department of Integrative Biology University of Guelph. I was awarded tenure in February 2014.

### PREVIOUS POSITIONS

Assistant Professor, Molecular Ecology, Department of Integrative Biology (seconded to the Biodiversity Institute of Ontario University of Guelph from Feb 2009 – Feb 2014).

Fonds Nature et Technologies B-3 Post Doctoral Fellow, Department of Integrative Biology, University of Guelph. 2004-2006.

### RESEARCH GRANTS-CURRENT (4) (total career grant \$\$ of >2 million CAD)

Grant	Date	Amount (\$) CAD	Role
NSERC Discovery Grant: Testing the ecophylogenetic hypothesis with species and spaces along ecological gradients	2015	160,000	PI
NSERC Collaborative Research and Development Grant: Evaluating the ecological and forestry impacts of even-aged vs uneven-aged management in a temperate deciduous forest», en collaboration avec Kenauk Canada ULC, Conservation de la nature du Canada	2017	347,500	co-PI
Atlantic Innovation Fund (AIF): Project A2.2. Barcoding chip: Innovative DNA-based diagnostic for spruce budworm (SBW), its natural enemies, and other conifer-feeding species	2014	644,593	Sub-Project PI
OMRI Early Researcher Award (ERA): Insect diversity and phylogenetic community structure of Ontario forests: problems and solutions	2013	150,000	PI

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**RESEARCH GRANTS-COMPLETED (10)**

Grant	Date	Amount (\$)	Role
New Brunswick Wildlife Trust Fund – Ants of New Brunswick: Assessing species assemblages in protected natural areas across the province	2014	10,000	PI
NSERC Discovery Grant: The diversity of species and spaces along ecological gradients	2014	20,000	PI
International Conservation Fund of Canada – Anne Lambert. One year donation of salary for Costa Rican parataxonomist.	2014	15,000	PI
Canada Foundation for Innovation Leaders Opportunity Fund. “From the Tundra to the Tropics: Innovative Biodiversity Science”	2011	923,561	co-PI
NSERC Discovery Grant “Species and Spaces: Biodiversity at landscape and community scales”	2009	120,000	PI
Systematics Research Fund (SRF) from the Councils of the Linnean Society and the Systematics Association. “Testing Bergmann’s and Allen’s rules with ants along a neotropical elevation gradient”	2012	2,4000	PI
University of Guelph Learning Enhancement Fund. “Enhancing experiential learning in the Arctic”	2012	8,000	co-PI
NSERC Research and Technologies Instrumentation Grant. “Species and spaces: molecular ecological analyses of biodiversity”	2009	61,000	PI
Research Proposals at Nouragues (French Guiana): Insect biodiversity in the Neotropics: refining affinities and shared diversity between Central-American and Amazonian faunas	2009	14,000	co-PI
National Science Foundation (NSF) grant (Syst Biology & Biodiversity. “Ants of the Southwest Indian Ocean and East Africa (ASWEA): assessing phylogenetic diversity and biogeographic linkages across the Mozambique Channel”	2009	230,000	co-PI

**MAJOR AWARDS (5)**

- Fonds Nature et Technologies B-3 Post-Doctoral Fellowship. University of Guelph. April 2004 - March 2006. \$60,000
- Fonds Nature et Technologies B-2 Scholarship. McGill University. March 2002 – September 2002. \$6,666
- NSERC PGS-B Scholarship. McGill University. September 1999 – September 2001. \$38,000.

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- NSERC PGS-A Scholarship. Trent University. September 1996 – September 1998. \$30,000
- Ontario Graduate Scholarship (Declined) September 1996 – September 1998. \$26,000

### AWARDS (14)

- Canadian Union of Public Service Employees Professional Development Fund. Trent University. November 2007. \$1,200
- Canadian Union of Public Service Employees Professional Development Fund. Trent University. February 2006. \$670
- Alma Mater Student Travel Grant. McGill University. August 2004. \$1,000
- Graduate Training Committee Scholarship. McGill University. August 2004. \$400
- Canadian Union of Public Service Employees Professional Development Fund. Trent University. September 2003. \$400
- MGSF Scholarship. McGill University. September 2002. \$5,000
- Class of 66 Award. McGill University. September 2002. \$2,500
- Philip Carpenter Entrance Scholarship. McGill University. September 1999. \$2,000
- Watershed Ecosystems Entrance Award. Trent University. September 1996. \$500
- Outstanding Honours Thesis Award. Trent University. May 1996.
- Biology Department Scholarship. Trent University. September 1995. \$500
- J. E. Goodhead Scholarship. Trent University. September 1994. \$250
- Academic All Canadian Award – CIS Academic All-Canadian certificates are presented to student-athletes who have achieved 80% or better average while representing their university as a varsity athlete. Trent University – cross-country running: 1993 & 1994.

### PUBLICATIONS (81, 2 in review):

**h-index:** 26

**i10-index:** 36

**Citations:** 4330

**Google Scholar:** <http://bit.ly/SUuTCY>

### PUBLISHED

(graduate student authors in bold, undergraduate students bold and underlined)

1. Fleming A, Wood D, Smith MA, Dapkey T, Hallwachs W, Janzen D (2017) Five new species of *Vibrissina* Rondani (Diptera: Tachinidae) from Area de Conservación Guanacaste in Northwestern Costa Rica. Biodiversity Data Journal 5: e10967. <https://doi.org/10.3897/BDJ.5.e10967>
2. Smith, M. Alex, **Boyd, A., Chan, A, Clout, S., des Brisay, P, Dolson, S., Eagalle, T., Espinola, S., Fairweather, A., Frank, S., Fruetel, C., Garrido Cortes C., Hall, J., Ho, C., Matczak, E., McCubbin, S., McPhee, M, Pare, K. A., Paris, K, Richard, E., Roblin, M., Russell, C., Snyder, R., Trombley, C., Schmitt, T., Vandermeer, C., Warne, C., Welch, N., and C. Xavier-Blower** (2017) Investigating the effect of forestry on leaf-litter arthropods (Algonquin Park, Ontario, Canada). PLoS ONE 12(6): e0178568 <https://doi.org/10.1371/journal.pone.0178568>.
3. Smith, M. Alex, McDonald, JV, Kent, M, Morris, E and JC Trager (2017) The use of social media to document a range extension of an iconic social parasite ant. Journal of the Entomological Society of Ontario. 148: 1–5.

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4. Fleming A, Wood D, Smith M, Hallwachs W, Janzen D, Dapkey T (2017) Nine new species of *Uramya* Robineau-Desvoidy (Diptera: Tachinidae) from Area de Conservación Guanacaste in northwestern Costa Rica, with a key to their identification. Biodiversity Data Journal 5: e9649 (07 Mar 2017) <https://doi.org/10.3897/BDJ.5.e9649>
5. Quicke, Donald L. J. Belokobylskij, Sergey A. Smith, M. Alex Rota, Jadranka Hrcek, Jan Butcher, Buntika A, Hrcek J, and B. Butcher (2016). A New Genus of Rhysipoline Wasp (Hymenoptera: Braconidae) with Modified Wing Venation from Africa and Papua New Guinea, Parasitoid on Choreutidae (Lepidoptera). Annales Zoologici 66(2):173-192. doi: <http://dx.doi.org/10.3161/00034541ANZ2016.66.2.003>
6. Fernandez-Triana JL, Whitfield JB, Smith MA, Dapkey T, Hallwachs W, Janzen DH (2016) Review of the world species of *Exoryza* (Hymenoptera, Braconidae, Microgastrinae), with description of five new species. Deutsche Entomologische Zeitschrift 63(2): 195-210. doi: 10.3897/dez.63.8977
7. Fernández-Triana J, Boudreault C, Dapkey T, Smith MA, Rodriguez J, Hallwachs W, Janzen DH (2016) Revision of the genus *Promicrogaster* (Hymenoptera, Braconidae, Microgastrinae) from Area de Conservación Guanacaste, Costa Rica, with a key to all species previously described from Mesoamerica. Journal of Hymenoptera Research 50: 25-79. doi: 10.3897/JHR.50.8220
  - This fantastic project, where we named 20 new wasp species after Costa Rican schoolchildren, was the subject of an article in the Tico Times.
  - There was an article written about this project for the UofG News.
  - Spoke with Kitchener-Waterloo CBC morning radio about this work. They wrote about that here.
8. AJ Fleming, D. Monty Wood, M. Alex Smith, Winnie Hallwachs, Daniel Janzen, Tanya Dapkey (2016) Two new species of *Erythromelana* Townsend, 1919 (Diptera: Tachinidae) from Area de Conservación Guanacaste in northwestern Costa Rica. Biodiversity Data Journal 4: e7386. <http://bdj.pensoft.net/articles.php?id=7386>
9. Fleming A, Wood D, Smith M, Janzen D, Hallwachs W, Dapkey T (2016) A new species of *Phosocephala* Townsend, 1908 (Diptera: Tachinidae) from Area de Conservación Guanacaste in northwestern Costa Rica. Biodiversity Data Journal 4: e7863. doi: 10.3897/BDJ.4.e7863
10. Corinne Vacher, Alireza Tamaddon-Nezhad, Stefaniya Kamenova, Nathalie Peyrard, Yann Moalic, Régis Sabbadin, Loïc Schwaller, Julien Chiquet, M. Alex Smith, Jessica Vallance, Virgil Fievet, Boris Jakuschkin, David A. Bohan, (2016) Learning Ecological Networks from Next-Generation Sequencing Data, Advances in Ecological Research, Academic Press, ISSN 0065-2504, <http://dx.doi.org/10.1016/bs.aecr.2015.10.004>.
11. AJ Fleming, D. Monty Wood, M. Alex Smith, Daniel H. Janzen, Winnie Hallwachs (2015) Nine new species of Itaplectops (Diptera: Tachinidae) reared from caterpillars in Area de Conservación Guanacaste, northwestern Costa Rica, with a key to Itaplectops species. Biodiversity Data Journal. 3: e4596 (23 Dec 2015) doi: 10.3897/BDJ.3.e4596
12. Henri Goulet, David R. Smith, M. Alex Smith and José Fernández-Triana (2015) New Country Records for *Teredon cubensis* (Cresson) (Hymenoptera: Siricidae). Proceedings of the Entomological Society of Washington 117(4):522-524.
13. Smith, M. Alex (2015) Ants, elevation, phylogenetic diversity and community structure. Ecosphere. <http://dx.doi.org/10.1890/ES14-00473.1>
14. Smith, M. Alex, **Amanda Boyd**, Trevor Bringloe, **Chris Britton-Foster**, **Hayley Cahill**, **Kelsey Desnoyers**, **Natalie Duitshaever**, **Dan Gibson**, **Steve James**, **Yurak Jeong**, **Darren Kelly**, **Eli Levene**, **Hilary Lyttle**, **Talia Masse**, **Kate Pare**, **Kelsie Paris**, **Cassie Russell**, **Eric Scott**, **Debbie Silva**, **Megan Sparkes**, **Kami Valkova** S. J. Adamowicz (2015) The northward distribution of

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ants forty years later: re-visiting Gregg's 1972 collections in Churchill, Manitoba, Canada. *The Canadian Entomologist*. <http://dx.doi.org/10.4039/tce.2015.53>

- The 21 authors were the undergraduate students and instructors in the 2012 field course in Arctic Ecology.
  - Blog post written by undergraduate co-authors:  
<http://escsecblog.com/2015/09/29/from-inquiring-students-to-published-authors-an-adventure-in-the-arctic/>
15. Sharkey, MJ, EG Chapman, DH Janzen, W Hallwachs and M. Alex Smith (2015) Revision of *Aphelagathis* (Hymenoptera, Braconidae, Agathidinae, Agathidini). *Zootaxa* 4000 (1): 073–089 (13 Aug. 2015) DOI: <http://dx.doi.org/10.11646/zootaxa.4000.1.3>
  16. Fleming A, Wood D, Janzen D, Hallwachs W, Smith M Alex (2015) Three new species of *Trigonospila* Pokorny (Diptera: Tachinidae), from Area de Conservación Guanacaste, northwestern Costa Rica, with a key for their identification. *Biodiversity Data Journal* 3: e4595. doi: 10.3897/BDJ.3.e4595
  17. Fleming A, Wood D, Smith M. Alex, Hallwachs W, Janzen D (2015) Three new species of *Ametadoria* Townsend (Diptera: Tachinidae), from Area de Conservación Guanacaste, northwestern Costa Rica. *Biodiversity Data Journal*. 3: e5039 (10 Aug 2015) doi: 10.3897/BDJ.3.e5039
  18. Fernandez-Triana JL, Whitfield JB, Smith MA, Kula RR, Hallwachs W, Janzen DH (2015) Revision of the genera *Microplitis* and *Snellenius* (Hymenoptera, Braconidae, Microgastrinae) from Area de Conservación Guanacaste, Costa Rica, with a key to all species previously described from Mesoamerica. *Deutsche Entomologische Zeitschrift* 62(2): 137-201. doi: 10.3897/dez.62.5276
  19. Fleming A, Wood D, Janzen D, Hallwachs W, Smith M. Alex (2015) Seven new species of *Spathidexia* Townsend (Diptera: Tachinidae) reared from caterpillars in Area de Conservación Guanacaste, Costa Rica. *Biodiversity Data Journal* 3: e4597. doi: 10.3897/BDJ.3.e4597
  20. Hansson, C., M. Alex Smith, D. H. Janzen and W. Hallwachs (2015) Integrative taxonomy of New World *Euplectrus* Westwood (Hymenoptera, Eulophidae), with focus on 55 new species from Area de Conservación Guanacaste, northwestern Costa Rica. *ZooKeys* 485: 1-236 doi: 10.3897/zookeys.485.9124
  21. Pook, V. G., Chapman, E. G., Janzen, D. H., Hallwachs, W., Smith, M. Alex, Sharkey, M. J. (2015) Polydnavirus gene provides accurate identification of species in the genus *Hyposoter* (Hymenoptera: Ichneumonidae). *Insect Conservation and Diversity*. <http://dx.doi.org/10.1111/icad.12118>
  22. M. Alex Smith, Daniel H. Janzen, Winnie Hallwachs and John T. Longino (2015) Observations of *Adelomyrmex* (Hymenoptera: Formicidae) reproductive biology facilitated by digital field microscopy and DNA barcoding. *The Canadian Entomologist*. DOI: <http://dx.doi.org/10.4039/tce.2014.82>
  23. Fernandez-Triana J, Whitfield, JB, Smith, M Alex, Hallwachs W and Janzen DH (2014) Revision of the neotropical genus *Sendaphne* Nixon (Hymenoptera, Braconidae, Microgastrinae). *Journal of Hymenoptera Research* 41: 1-29.
  24. Fernandez-Triana J, Janzen D, Hallwachs W, Whitfield J, Smith M, Kula R (2014) Revision of the genus *Pseudapanteles* (Hymenoptera, Braconidae, Microgastrinae), with emphasis on the species in Area de Conservación Guanacaste, northwestern Costa Rica. *ZooKeys* 446: 1-82. doi: 10.3897/zookeys.446.8195

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25. Fleming, AJ, Wood, M, MA Smith, DH Janzen W. Hallwachs. (2014) A new species of *Cordyligaster* Macquart, reared from caterpillars in Area de Conservacion Guanacaste, northwestern Costa Rica. Biodiversity Data Journal 2: e4174 doi: 10.3897/BDJ.2.e4174
26. Fernandez-Triana J, Whitfield, James B., Smith, M. Alex, Hallwachs, Winnie, and Daniel H. Janzen (2014) First record of the genus *Venanus* (Hymenoptera: Braconidae: Microgastrinae) in Mesoamerica, with the description of two new species from Costa Rica. Biodiversity Data Journal 2: e4167 doi: 10.3897/BDJ.2.e4167
27. Fernandez-Triana J, Penev L, Ratnasingham S, Smith M. Alex, Sones J, Telfer A, deWaard J, Hebert P (2014) Streamlining the use of BOLD specimen data to record species distributions: a case study with ten Nearctic species of Microgastrinae (Hymenoptera: Braconidae). Biodiversity Data Journal 2: e4153. doi: 10.3897/BDJ.2.e4153
28. Fleming, A. J., D. M. Wood, M. Alex Smith, W. Hallwachs, and D. H. Janzen. (2014) Description of New World species of *Houghia* Coquillett (Diptera: Tachinidae): 35 species, including 34 new species, reared from caterpillars in Area de Conservacion Guanacaste, northwestern Costa Rica, including a list of generic synonyms of *Houghia*, a list of species, and fixations of 12 lectotypes. Zootaxa 3858 (1): 001–090.
29. **Moffat, C.E.** and M. Alex Smith (2014) Pre-release detection of a biocontrol agent: combining independent and public DNA sequences to identify the first North American record of *Aulacidea pilosellae* (Hymenoptera: Cynipidae). Canadian Entomologist. DOI: <http://dx.doi.org/10.4039/tce.2014.48>
30. Otis, G. M. Alex Smith and **J. Spero.** (2014) Lyside sulphur (Lepidoptera: Pieridae): origin and possible modes of transport of an Ontario, Canada specimen. The Canadian Entomologist. DOI: <http://dx.doi.org/10.4039/tce.2014.18>
31. JL Fernandez-Triana, JB Whitfield, MA Smith, Y Braet, W Hallwachs and DH Janzen (2014) Review of the Neotropical genus *Prasmodon* Hymenoptera, Braconidae, Microgastrinae), with emphasis on species from Area de Conservación Guanacaste, northwestern Costa Rica., Journal of Hymenoptera Research 37:1-52
32. Smith, M. Alex, D. H. Janzen and W. Hallwachs (2014) Diversity and phylogenetic community structure of ants along a Costa Rican elevational gradient. Ecography 37: 720–731. DOI: 10.1111/j.1600-0587.2013.00631.x
  - Editor’s Choice for August 2014
33. Fernández-Triana J.L.; Whitfield, J.B.; Rodriguez. J.J.; Smith, M.A.; Janzen, D.H.; Hallwachs, W.; Hajibabaei, M.; Burns, J.M.; Solis, M.A.; Brown, J.; Cardinal, S.; Goulet, H.; Hebert, P.D.N. (2014) Review of *Apanteles* (Hymenoptera: Braconidae, Microgastrinae) from Area de Conservación Guanacaste, northwestern Costa Rica, with keys to all described species from Mesoamerica. Zookeys 383: 1–565
34. Smith, M. A., Hallwachs, W, Janzen DH, and R. Blanco Segura (2013) DNA barcoding a collection of ants (Formicidae) from Isla del Coco, Costa Rica. Florida Entomologist. 96 (4), 1500-1507
35. Fernández-Triana, J., S. Cardinal, J.B. Whitfield, W. Hallwachs, M. Alex Smith, D.H. Janzen (2013) A review of the New World species of the parasitoid wasp *Iconella* (Hymenoptera: Braconidae, Microgastrinae). Zookeys. 321: 65–87
36. Quicke, D. L. J. M. Alex Smith, Hrcek, J. and Butcher, B. A. (2013) *Cystomastacoides* van Achterberg (Braconidae, Rogadinae): first host record and descriptions of two new species from Thailand and Papua New Guinea *Journal of Hymenoptera Research* 31: 65–78.
37. Julie K. Stahlhut José Fernández-Triana, Sarah J. Adamowicz, Matthias Buck, Henri Goulet, Paul D.N. Hebert, John T. Huber, Mark Merilo, Cory S. Sheffield, Thomas Woodcock, and M.

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Alex Smith. (2013) DNA barcoding reveals diversity of Hymenoptera and the dominance of parasitoids in a sub-arctic environment. *BMC Ecology*. **13**:2 doi: 10.1186/1472-6785-13-2.

- “highly accessed”

38. Smith, M. Alex; Fernández-Triana, José; Eveleigh, Eldon; Gómez, Jaime; Guclu, Coskun; Hallwachs, Winnie; Hebert, Paul; Hrcek, Jan; Huber, John; Janzen, Daniel; Mason, Peter; Miller, Scott ; Quicke, Donald; Rodriguez, Josephine; Rougerie, Rodolphe; Shaw, Mark; Varkonyi, Gergely; Ward, Darren; Whitfield, James and Alejandro Zaldivar-Riveron. (2013) DNA barcoding and the taxonomy of Microgastrinae wasps (Hymenoptera, Braconidae): impacts after eight years and nearly 20,000 sequences. *Molecular Ecology Resources*. **13**(2):168-76.
39. Rodriguez, Josephine; Fernández-Triana, José; Smith, M. Alex; Janzen, Daniel; Hallwachs, Winnie; Erwin, Terry and Whitfield, James. (2013) Extrapolations from field studies and known faunas converge on dramatically increased estimates of global microgastrine parasitoid wasp species richness (Hymenoptera: Braconidae). *Insect Conservation and Biodiversity*. **6**: 530–536.
40. Julie K. Stahlhut, Jason Gibbs, Cory S. Sheffield, M. Alex Smith, and Laurence Packer (2012) *Wolbachia* (Rickettsiales) infections and bee (Apoidea) barcoding: A response to Gerth *et al.* *Systematics and Biodiversity*. **10**: 395-401
41. Daniel H. Janzen, Winnie Hallwachs, Don Harvey, Karolyn Darrow, Rodolphe Rougerie, Mehrdad Hajibabaei, M. Alex Smith, Isidro Chacon, Bernardo Espinoza, Bo Sullivan, Thibaud Decaens, Daniel Herbin, Luis Felipe Chavarria, Ruth Franco, Hazel Cambronero, Sergio Rios, Freddy Quesada, Guillermo Pereira, Johan Vargas, Adrian Guadamuz, Roberto Espinoza, Jorge Hernandez, Lucia Rios, Elieth Cantillano, Roster Moraga, Calixto Moraga, Petrona Rios, Manuel Rios, Ricardo Calero, Dinia Martinez, Duvalier Briceño, Minor Carmona, Edwin Apu, Keiner Aragon, Cirilo Umaña, Jose Perez, Ana Cordoba, Pablo Umaña, Gloria Sihezar, Osvaldo Espinoza, Carolina Cano, Elda Araya, Dunia Garcia, Harry Ramirez, Manuel Pereira, Jose Cortez, Mariano Pereira and Paul Hebert (2012) What happens to the traditional taxonomy when a well-known tropical saturniid moth fauna is DNA barcoded? *Invertebrate Systematics*. **26**:478–505.
42. Smith, D.R., D. H. Janzen, W. Hallwachs, M. Alex Smith. (2012) Hyperparasitoid wasps (Hymenoptera: Trigonidae) reared from dry forest and rain forest caterpillars of Area de Conservación Guanacaste, Costa Rica. *Journal of Hymenoptera Research* **29**: 119-144.
43. Butcher, B. A., M. Alex Smith, M. J. Sharkey, and D. L. J. Quicke. (2012) A turbo-taxonomic study of Thai *Aleiodes* (*Aleiodes*) and *Aleiodes* (*Arcaleiodes*) (Hymenoptera: Braconidae: Rogadinae) based largely on COI barcoded specimens, with rapid descriptions of 179 new species. *Zootaxa* **3457**: 1–232.
44. Quicke, D. L. J. M. Alex Smith, Miller, S. E., Hrcek, J. and Butcher, B. A. (2012) *Colastomion* Baker (Braconidae, Rogadinae): nine new species from Papua New Guinea reared from Crambidae. *Journal of Hymenoptera Research*. **28**:85-121.
45. E. Karen López-Estrada, Rosa Briceño G., M. Alex Smith , Juliano Fiorelini Nunes, Angélica M. Penteado-Dias, Fadia Sara Ceccarelli, Hans Clebsch , and Alejandro Zaldivar-Riverón. (2012) Six new species of *Notiospathius* (Hymenoptera: Braconidae: Doryctinae) from Northwest Venezuela. *Journal of Hymenoptera Research* **29**: 37-61.
46. Whitfield, J. H., W. Hallwachs, D. H. Janzen, M. Alex Smith and J. Fernandez-Triana (2012) *Mariapanteles* (Hymenoptera: Braconidae), a new genus of Neotropical microgastrine parasitoid wasp discovered through biodiversity inventory. *ZooKeys* **208** : 61-80.
47. Smith, M. Alex. (2012). Species barcoding. In Daniel Fogel, Sarah Fredericks, Lisa Harrington, & Ian Spellerberg (Eds.), *The Encyclopedia of Sustainability: Vol. 6. Measurements,*

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Indicators, and Research Methods for Sustainability (pp. 326–328). Great Barrington, MA: Berkshire Publishing.

48. Smith, M. Alex **Bertrand, C.**, Crosby, K., Eveleigh, E.S., Fernandez-Triana, J., Fisher, B.L., Gibbs, J., Hajibabaei, M., Hallwachs, W., Hind, K., Hrcek, J., Huang, D-W., Janda, M., Janzen, D. H., Li, Y., Miller, S.E., Packer, L., Quicke, D., Ratnasingham, S., Rodriguez, J., Rougerie, R., Shaw, M.R., Sheffield, C., Stahlhut, J.K., Steinke, D., Whitfield, J., Wood, M., Zhou, X. 28 authors listed alphabetically after 1<sup>st</sup>. (2012) *Wolbachia* and Barcoding Insects: Problems, Patterns and Potential. PLoS ONE 7(5):e36514.
49. Quicke, D. L. J., Smith, M. Alex, van Achterberg, C., Miller, S. E. Jan Hrcek, J. (2012) A new genus and three new species of parasitoid wasp from Papua New Guinea and redescription of *Trigonophatnus* Cameron (Hymenoptera, Braconidae, Rogadinae). Journal of Natural History, 46:21-22 1369-1385.
50. Quicke, D. L. J., M. Alex Smith, Janzen, D. H., Hallwachs, W., Fernandez-Triana, J., Laurenne, N. M., Zaldivar-Riveron, A., Shaw, M. R., Broad, G. R., Klopstein, S., Shaw, S. R., Hrcek, J., Hebert, P. D. N., Miller, S. E., Rodriguez, J. J., Whitfield, J. B., Sharkey, M. J., Sharanowski, B. J., Jussila, R., Gauld [Deceased], I. D., Chesters, D. and Vogler, A. P. (2012), Utility of the DNA barcoding gene fragment for parasitic wasp phylogeny (Hymenoptera: Ichneumonoidea): data release and new measure of taxonomic congruence. Molecular Ecology Resources. 12(4):676-85.
51. Butcher Buntika, Smith, M. Alex, Quicke, D. L. J. (2011) A new derived species group of *Aleiodes* parasitoid wasps (Hymenoptera, Braconidae, Rogadinae) from Asia with descriptions of three new species. Journal of Hymenoptera Research 23: 35-42.
52. Sharkey, M. J., Clutts, S., Tucker E. M., Janzen, D. H., Hallwachs, W., Dapkey, T., and Smith, M. Alex. (2011). *Lytopylus* Förster (Hymenoptera, Braconidae, Agathidinae) species from Costa Rica, with an emphasis on specimens reared from caterpillars in Area de Conservación Guanacaste. ZooKeys 130: 379–419.
53. Fernandez-Triana\*, J. Smith, M. Alex\*, Bodreault, C., Goulet, H., Hebert PDN, Smith AC, and Roughley, R. [deceased] (2011). A poorly known high-latitude parasitoid wasp community: unexpected diversity and dramatic changes through time. PLoS ONE 6(8): e23719 (\*these authors made equal contributions and are considered first co-authors)
54. Smith, M. Alex, Eveleigh, ES, McCann, KS, **Merilo, M.**, McCarthy, PC, Van Rooyen, KI. (2011) Barcoding a quantified food web: crypsis, concepts, ecology and hypotheses. PLoS ONE 6(7): e14424.
55. Hrcek, Jan, Miller, Scott, Quicke, Donald, and Smith, M. Alex. (2011) Molecular detection of trophic links in a complex insect host-parasitoid food web. Molecular Ecology Resources. 11(5):786-94.
56. Rougerie, R., Smith, M. Alex, Fernandez- Triana, J., Lopez-Vaamonde, C., and Hebert, PDN. (2011) Molecular analysis of parasitoid linkages (MAPL): gut contents of adult parasitoid wasps reveal larval host. Molecular Ecology. 20: 179–186.
57. Zaldivar-Riverón, A., Martínez, J., De Jesús-Bonilla, V., Ceccarelli, F., Rodríguez-Pérez, A., Reséndiz-Flores, A., Smith, M. Alex (2010) DNA barcoding a highly diverse group of parasitoid wasps (Braconidae: Doryctinae) from a Mexican nature reserve. Mitochondrial DNA. 21(S1): 18–23.
58. Crozier, R. H., Agapow, P-M., and M. Alex Smith. (2010) Conservation genetics: from species to habitats. in BIODIVERSITY RESEARCH— SAFEGUARDING THE FUTURE: Outcomes and recommendations of the CBD - COP 9 Associated Meeting Bonn, May 2008, Editor: Jessica M. Reeves. pp 73-79.



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59. Smith, M. Alex. (2010) A year in an urban forest: Dairy Bush GigaPan 2009–2010. Fine International Conference on Gigapixel Imaging for Science, November 11–13 2010.
60. Smith, M. Alex, and B. L. Fisher. (2009) Invasions, DNA barcodes, and rapid biodiversity assessment using ants of Mauritius. *Frontiers in Zoology*. 6:31.
61. Smith, M. Alex, Fernandez, J. T., Roughley, R. and Hebert, P. D. N. (2009) DNA Barcode accumulation curves for understudied taxa and areas. *Molecular Ecology Resources*. 9s1:208–216.
62. Janzen, D. H., Hallwachs, W., Smith, M. Alex, and 43 others. (2009) Integration of DNA barcoding into an ongoing inventory of tropical complex biodiversity. *Molecular Ecology Resources*. 9s1:1–26.
63. Smith, M. Alex, Rodriguez, J., Whitfield, J., Deans, A., Janzen, D. L., Hallwachs, W., and Hebert, P. D. N. (2008) Extreme diversity of tropical parasitoid wasps exposed by iterative integration of natural history, DNA barcoding, morphology and collections. *Proceedings of the National Academy of Sciences*. 105 (34):12359–12364.
64. Fisher B. L, Smith M., Alex (2008) A Revision of Malagasy Species of *Anochetus* Mayr and *Odontomachus* Latreille (Hymenoptera: Formicidae). *PLoS ONE* 3(5): e1787.
65. Smith, M. Alex (2008) DNA barcodes to assess identity and diversity of *Dendropsophus minutus*: Failure? *Zootaxa*. 1691:67–68.
66. Smith, M. Alex, Poyarkov, N., and Hebert, P. D. N. (2008) COI DNA barcoding and amphibians: take the chance, meet the challenge. *Molecular Ecology Resources*: 8(2): 235–246.
67. Smith, M. Alex, Wood, D. M., Janzen, D. L., Hallwachs, W. and Hebert, P. D. N. (2007) DNA barcodes affirm that 16 species of apparently generalist tropical parasitoid flies (Diptera, Tachinidae) are not all generalists. *Proceedings of the National Academy of Sciences*. 104(12):4967–4972.
68. Smith, M. Alex, Green, D. M. (2006) Sex, isolation and fidelity: unbiased long distance dispersal in a terrestrial amphibian. *Ecography*. 29: 649–658.
69. Hajibabaei, M., Smith, M. Alex, Janzen, D. H., Rodriguez, J. J., Whitfield, J. B., and Hebert, P. D. N. (2006) A minimalist barcode can identify a specimen whose DNA is degraded. *Molecular Ecology Notes*. 6: 959–964.
70. Smith, M. Alex, Woodley, N. Hallwachs, W. Janzen, D. H. Hebert, P. D. N. (2006) DNA barcodes reveal cryptic host-specificity within the presumed polyphagous members of a genus of parasitoid flies (Diptera: Tachinidae). *Proceedings of the National Academy of Sciences*. 103(10):3657–3662.
71. Smith, M. Alex, Fisher, B. L., and Hebert, P. D. N. (2005) DNA barcoding for effective biodiversity assessment of a hyperdiverse arthropod group: the ants of Madagascar. *Philosophical Transactions of the Royal Society: B*. 360:1828–1834.
72. Smith, M. Alex, Green, D. M. (2005) Dispersal and the metapopulation paradigm in amphibian ecology and conservation: Are all amphibian populations metapopulations? *Ecography* 28(1): 110–128.
73. Smith, M. Alex, Green, D. M. (2005) *Bufo fowleri* (Fowler's Toad): Predation. *Herpetological Review* 36(2):159–160.
74. Smith, M. Alex, Green, D. M. (2004) Phylogeography of *Bufo fowleri* at its northern edge of range. *Molecular Ecology* 13(12): 3723–3733.
75. Smith, M. Alex, Berrill, M., and Kapron, C. (2002) Photolyase activity of the embryo and the ultraviolet absorbance of embryo jelly for several Ontario amphibian species. *Canadian Journal of Zoology* 80:1109–1116

## M. ALEX SMITH – CV

76. Smith, M. Alex, and Green, D. M. (2002) *Bufo fowleri*: Predation. Herpetological Review 33(2): 125
77. Smith, M. Alex (2002) *Pseudacris triseriata triseriata*: Reproduction. Herpetological Review 33(2): 127
78. Smith, M. Alex, Kapron, C., and Berrill, M. (2000) Induction of photolyase activity in wood frog (*Rana sylvatica*) embryos. Photochemistry and Photobiology 72:575-578.
79. Smith, M. Alex (2000) Problems utilizing enzyme sensitive site assays for photorepair of exogenous DNA with cell free extracts made from amphibian embryos. Canadian Journal of Zoology 78:1869-1872.
80. Crump, D., Berrill, M., Coulson, D., Lean, D. R. S., McGillivray, L., and Smith, M. Alex (1999) Sensitivity of eight species of amphibian embryos, tadpoles and larvae to enhanced UV-B radiation in natural pond conditions in Southern Ontario. Canadian Journal of Zoology 77:1956-1966.
81. Smith, M. Alex, and Bidochka, M. (1998) Bacterial fitness and plasmid loss: the importance of culture conditions and plasmid size. Canadian Journal of Microbiology 44: 351-355.

### PEER-REVIEWED CONFERENCE ABSTRACTS (8)

- Smith, M. A. (2016). When ants get up; they sure get brown. POSTER AND PRESENTATION ABSTRACTS ENTOMOLOGICAL SOCIETY OF ONTARIO ANNUAL GENERAL MEETING. Journal of the Entomological Society. 147:40
- Dolson, S., Loewen, E., and M. A. Smith (2016) Staphylinid diversity across a Neotropical elevation gradient. POSTER AND PRESENTATION ABSTRACTS ENTOMOLOGICAL SOCIETY OF ONTARIO ANNUAL GENERAL MEETING. Journal of the Entomological Society. 147:35
- Loewen, E., Dolson, S. and M. A. Smith (2016) An investigation of Staphylinidae functional diversity along a neotropical elevation. POSTER AND PRESENTATION ABSTRACTS ENTOMOLOGICAL SOCIETY OF ONTARIO ANNUAL GENERAL MEETING. Journal of the Entomological Society. 147:35

## M. ALEX SMITH – CV

- Fairweather, A., McAlpine, D., & Smith, M.A. (2015) The effect of anthropogenic disturbance on diversity and phylogenetic structure of ants (Hymenoptera: Formicidae). In Scientific abstracts from the 6th International Barcode of Life Conference (ed. by S.J. Adamowicz), Vol. 58, pp. 163-303. Genome. DOI:10.1139/gen-2015-0087
- Ho, C. & Smith, M.A. (2015) Impacts of anthropogenic disturbance on arthropod biodiversity and community structure. In Scientific abstracts from the 6th International Barcode of Life Conference (ed. by S.J. Adamowicz), Vol. 58, pp. 163-303. Genome. DOI:10.1139/gen-2015-0087
- Pare, K. & Smith, M.A. (2015) By-passing the taxonomic impediment in Neotropical Collembola to measure changes in diversity and phylogenetic structure. In Scientific abstracts from the 6th International Barcode of Life Conference (ed. by S.J. Adamowicz), Vol. 58, pp. 163-303. Genome. DOI:10.1139/gen-2015-0087
- Smith, M.A., McPhee, M., Pare, K., Richard, E., Warne, C.P.K., Hallwachs, W., & Janzen, D.H. (2015) Elevation, cryptic, and phylogenetic community structure of Neotropical arthropods. In Scientific abstracts from the 6th International Barcode of Life Conference (ed. by S.J. Adamowicz), Vol. 58, pp. 163-303. Genome. DOI:10.1139/gen-2015-0087
- Solecki, A.M., Smith, M.A., Skevington, J.H., & Wheeler, T.A. (2015) Phylogeography of Diptera in northern North American glacial refugia. In Scientific abstracts from the 6th International Barcode of Life Conference (ed. by S.J. Adamowicz), Vol. 58, pp. 163-303. Genome. DOI:10.1139/gen-2015-0087

### NON-REFEREED PUBLICATIONS (17)

1. Jones, K. and M.A. Smith (2016) Staphylinidae across a neotropical elevational gradient: Changes in abundance, morphology and genetic diversity. Ontario Insects: the news journal of the Toronto Entomologists' Association. 21(3):10
2. Smith, M. Alex (2016). A Nobel prize and the unknown benefits that come from saying yes. Blog of the Entomological Society of Canada. October 26 2016.  
<https://escsecblog.com/2016/10/26/a-nobel-prize-and-the-unknown-benefits-that-come-from-saying-yes/>
3. Kate Pare and M. Alex Smith (2015) Identifying Patterns in Neotropical Collembola Diversity. iBOL Barcode Bulletin. Vol6 Issue 4 Kate Pare and M. Alex Smith (2015) Identifying Patterns in Neotropical Collembola Diversity. iBOL Barcode Bulletin. Vol6 Issue 4 [www.ibol.org/wp-content/uploads/2015/12/iBOL-Barcode-Bulletin-Dec-2015-Reduced.pdf#3](http://www.ibol.org/wp-content/uploads/2015/12/iBOL-Barcode-Bulletin-Dec-2015-Reduced.pdf#3)
4. M. Alex Smith (2015) Missed Mandate, Missed Biology: The ongoing “Mother Canada” debacle in Cape Breton Highlands National Park. The Official Blog of the Entomological Society of Canada <http://escsecblog.com/2015/07/06/missed-mandate-missed-biology-the-ongoing-mother-canada-debacle-in-cape-breton-highlands-national-park/>
5. M. Alex Smith (2014) The diversity and phylogenetic community structure of ants along a Costa Rican elevational gradient Ecography Blog post associated with Editor’s Choice for August 2014 volume: <http://www.ecography.org/blog/diversity-and-phylogenetic-community-structure-ants-along-costa-rican-elevational-gradient>
6. Smith, M. Alex, S. Adamowicz, **Amanda Boyd, Chris Britton-Foster, Hayley Cahill, Kelsey Desnoyers, Natalie Duitshaeffer, Dan Gibson, Steve James, Yurak Jeong, Darren Kelly, Eli Levene, Hilary Lyttle, Talia Masse, Kate Pare, Kelsie Paris, Cassie Russell, Eric Scott, Debbie Silva, Megan Sparkes, Kami Valkova** (2013) “Arctic Ecology” GigaPan Magazine Vol 5 Issue 1. [www.gigapanmagazine.org/vol5/issue1/](http://www.gigapanmagazine.org/vol5/issue1/) (students ordered alphabetically)
7. Smith, M. Alex (2012) *Wolbachia* and DNA Barcoding Insects. Barcode of Life Connect. [www.connect.barcodeoflife.net/profiles/blogs/wolbachia-and-dna-barcoding-insects](http://www.connect.barcodeoflife.net/profiles/blogs/wolbachia-and-dna-barcoding-insects)

## M. ALEX SMITH – CV

8. Tamminga, K., vanEngelsdorp, D., Smith, M. Alex. (2012) Nearby Nature II, June 2012 Editorial. GigaPan Magazine. Vol 4 Issue 2. [www.gigapanmagazine.org/vol4/issue2/](http://www.gigapanmagazine.org/vol4/issue2/)
9. Smith, M. Alex, vanEngelsdorp, D, Daines, MJ, and Tamminga, K. (2011) Nearby Nature GigaBlitz, November 2011 Editorial. GigaPan Magazine. Vol 3 Issue 4. [www.gigapanmagazine.org/vol3/issue6/](http://www.gigapanmagazine.org/vol3/issue6/)
10. Smith, M. Alex, (2010) GigaPan: Integrating high-resolution imagery into DNA barcoding. Barcode Bulletin Vol. 1, No. 3 – September 2010 [ibol.org/gigapan](http://ibol.org/gigapan)
11. Green, D. M., and Smith, M. Alex (2009) Status report on *Bufo (Anaxyrus) fowleri* (Fowler's Toad): Prepared for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
12. Smith, M. Alex. (2009) "Myrmecos blog" - DNA barcoding is intellectually bankrupt...a reply from Alex Smith. [myrmecos.wordpress.com/2009/05/18/dna-barcoding-a-reply-from-alex-smith/](http://myrmecos.wordpress.com/2009/05/18/dna-barcoding-a-reply-from-alex-smith/)
13. Smith, M. Alex. (2009) "Discarding the future" - Globe and Mail letter to the Editor 30/01/09 page A12.- Regarding the contributions to science contained in the 2009 budget.
14. Crozier, R. H., Agapow, P. M., and M. Alex Smith Crozier, R. H. (2008). Conservation genetics: from species to habitats. Proceedings of the 9th Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity. Bonn Germany. 12 – 16 May 2008.
15. Smith M. Alex, Fisher, B. L., and Hebert, P.D. N. (2005). Biodiversity assessment of a hyperdiverse arthropod group: DNA barcoding the ants of Madagascar. p 164-166 In, SUCCESS STORIES IN IMPLEMENTATION OF THE PROGRAMMES OF WORK ON DRY AND SUB-HUMID LANDS AND THE GLOBAL TAXONOMY INITIATIVE. Secretariat of the Convention on Biological Diversity. Abstracts of Poster Presentations at the 11th Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity. Montreal, Technical Series no. 21, 189 pages. <https://biodiv.org/doc/publications/cbd-ts-21.pdf>
16. M. Alex Smith and Green, D. M. (2004) Species at risk assessment for *Bufo fowleri* in Canada – Population Viability Analysis. Prepared for the Recovery of Nationally Endangered Wildlife Committee
17. Green, D. M., and Smith M. Alex. (2000) Ecology and viability of Fowler's Toads (*Bufo fowleri*) populations. A report for the World Wildlife Fund Endangered Species Recovery Fund.

### INVITED PRESENTATIONS (56)

1. **Dolson, S.** and M. Alex Smith (2017) Elevation, crypsis and phylogenetic community structure of Neotropical arthropods: the importance of natural history collections. Canadian Society for Ecology and Evolution. Symposium on Natural History Collections. May 2017, Victoria, British Columbia.
2. M. Alex Smith (2017) Elevation, crypsis and phylogenetic community structure of Neotropical arthropods. Brock University, Biology Department Seminar Series. March 2017
3. M. Alex Smith (2016) Elevation, crypsis and phylogenetic community structure of Neotropical arthropods. Michigan State University Entomology Department Seminar Series. November 2016
4. M. Alex Smith (2016) Elevation, crypsis and phylogenetic community structure of Neotropical arthropods. Trent University, Biology Department Seminar Series. November 2016

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5. M. Alex Smith (2015) Elevation, crypsis and phylogenetic community structure of Neotropical arthropods. University of Manitoba Entomology Endowment Fund Speaker Series. November 3, 2015
6. M. Alex Smith (2015) Elevation, crypsis and phylogenetic community structure of Neotropical arthropods Seminaire d'Ecologie et Evolution Departement des sciences biologiques Universite du Quebec a Montreal. Montreal 14 October 2015.
7. Smith, M. Alex (2015) Diversity Gradients: Inferences and assumptions & examples with neotropical ants. McMaster University Seminar Series; March 5<sup>th</sup> 2015
8. Smith, M. Alex (2015) Neotropical ants along an elevation gradient: inferences, diversity and assumptions. University of Colorado, February 6<sup>th</sup> 2015
9. Smith, M. Alex (2014) Diversity Gradients: Inferences and Assumptions. University of Western Ontario Biology Department Seminar Series. October 31<sup>st</sup> 2014.
10. Smith, M. Alex (2014) Further on, in the wood down there, they've got no names": a biodiversity scientist's exploration of old problems and new tools. Upper Credit Field Naturalist Club. April 29, Orangeville Ontario.
11. Smith, M. Alex (2014) Further on, in the wood down there, they've got no names": a biodiversity scientist's exploration of old problems and new tools. Village by the Arboretum Supporters of Environmental and Societal Activities (SENSA). January 24. Guelph Ontario.
12. Smith, M. Alex (2014) Neotropical ants along an elevation gradient: inferences, diversity and digital opportunities. University of Windsor Departmental Seminar. January 10 2014.
13. Smith, M. Alex (2013) "DNA barcoding and its effective use in Ecology." – Quebec Centre for Biodiversity Science: Biodiversity Science Intensive School, McGill University, Mt. Ste. Hilaire, Quebec, November 27<sup>th</sup> 2013
14. Smith, M. Alex (2013) "Diversity, crypsis and rarity – an extraordinary diversity of parasitoid wasps" Entomological Society of America Annual Meeting, special symposium, "Guy Bush and Santa Rosalia: Speciation with gene flow and the extraordinary diversity of insects", Austin Texas, USA, November 10-13<sup>th</sup>, 2013.
15. Smith, M. Alex (2014) Neotropical ants along an elevation gradient: inferences, diversity and digital opportunities. University of Guelph Department of Math & Stats BIOSStats Seminar. October 29, 2013.
16. Smith, M. Alex and M. Cusson, (2013) "Parasitoid Genomics" International Entomophagous Insects Conference (IEIC3), Orford, Québec, Canada, June 2-6, 2013
17. Smith, M. Alex (2013). "Further on, in the wood down there, they've got no names" – Guelph Field Naturalists – Guelph, Ontario, March 14<sup>th</sup> 2013.
18. Smith, M. Alex (2012). "Spruce Budworm Food Web and DNA barcoding." – Entomological Society of Canada, Symposium on Spruce Budworm Genomics, Edmonton Alberta, November 5<sup>th</sup> 2012.
19. Smith, M. Alex (2012). "DNA barcoding and its effective use in Ecology." – Quebec Centre for Biodiversity Science: Biodiversity Science Intensive School, McGill University, Mt. Ste. Hilaire, Quebec, October 31<sup>st</sup> 2012.
20. Smith, M. Alex (2012). "Diversity, crypsis and phylogenetic community structure through barcoding an inventory of ants along a Costa Rican elevational gradient." – Department of Biology Seminar Series, Laurentian University, Sudbury Ontario, October 12<sup>th</sup> 2012.
21. Smith, M. Alex (2012). "Diversity, crypsis and phylogenetic community structure through barcoding an inventory of ants along a Costa Rican elevational gradient." - 1<sup>st</sup> Meeting of the iACG Research Group, Park Nacional Santa Rosa, Liberia, Costa Rica 23<sup>rd</sup> May 2012.
22. Smith, M. Alex (2012). ""Further on, in the wood down there, they've got no names" - 10<sup>th</sup> Annual Renfrew County Natural History Day Saturday, Eganville Ontario, 26<sup>th</sup> May 2012.

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23. Smith, M. Alex (2011). "Further on, in the wood down there, they've got no names" - ecology, conservation and evolution within the taxonomic impediment" September 22<sup>nd</sup>, Department of Biology, Ryerson University, Toronto Ontario.
24. Smith, M. Alex (2011). "The Ecology, Evolution and Conservation of Species and Spaces" March, 26, the UoG Biomimicry Collaborative, Guelph, ON.
25. Smith, M. Alex (2011). "The Ecology, Evolution and Conservation of Species and Spaces" March, 23, Department of Biology, Université de Montréal.
26. Smith, M. Alex (2010). "Further on, in the wood down there, they've got no names": molecular ecology, food webs and climate change. November 23, Institut de Biologie Intégrative et des Systèmes, Université Laval.
27. Smith, M. Alex (2010). Embracing Diversity in a Living City. Toronto Region Conservation Authority (TRCA) Education Professional Development Day, Tuesday, Toronto Ontario. September 7, 2010.
28. Smith, M. Alex. (2010) Conservation genetics, community ecology and environmental science. University of Saskatchewan, School of Environment and Sustainability, Saskatoon, SK. March 22<sup>nd</sup> 2010.
29. Smith, M. Alex. (2010) Webs, temperature and time: integrating community ecology and DNA barcoding. University of Toronto, Toronto, Ontario. February 12<sup>th</sup> 2010.
30. Smith, M. Alex. (2009) Integrating community ecology and DNA barcoding. Ontario Genomics Institute - Student Network (OGI-SN). University of Toronto, Toronto, Ontario. November 20<sup>th</sup>, 2009.
31. Smith, M. Alex. (2009) Integrating community ecology and DNA barcoding. Third International Barcode of Life Meeting, Plenary session, Mexico City, Mexico. November 11<sup>th</sup>, 2009.
32. Smith, M. Alex. (2009) Multi-gene and GIS analyses in the Barcode of Life Datasystem. Third International Barcode of Life Meeting, Mexico City, Mexico. November 10<sup>th</sup>, 2009.
33. Smith M. Alex. (2009) Fine Outreach for Science GigaPan Research program, Pittsburgh PA, USA – one of 5 invited scientists that have been beta testing this imaging robotic/software technique. May 19-22<sup>nd</sup> 2009.
34. Smith M. Alex. (2009) Building a biological barometer: climate change and DNA barcoding. Ecological and Evolutionary Implications of Climate Change Symposium Centre for Northern Studies Lakehead University, Thunder Bay, Ontario, Canada. March 7<sup>th</sup> 2009.
35. Smith M. Alex. (2008) DNA barcoding and Biodiversity: a comparative approach to species, diversity and ecology. Niagara College, Niagara on the Lake, Ontario. November 29, 2008.
36. Smith M. Alex. (2008) "Now this is not the end": a comparative approach to species, diversity and ecology. University of Guelph, Guelph, Ontario. Sept 2008.
37. Smith M. Alex. (2008) Barcoding all ants – what it would take; what we would learn. GAP: First International Meeting of a Global Campaign to Barcode Ants. May 29, 2008. Harvard University, Cambridge Massachusetts
38. Smith M. Alex. (2008) DNA barcoding Hymenoptera: what to learn from parasitoid wasps and ants. BeeBol: First International Meeting of a Global Campaign to Barcode Pollinators. May 12, 2008 York University, Toronto, Canada
39. Smith M. Alex. (2008) Accelerating species discovery: case studies in hyper-diverse parasitoid assemblages. 2<sup>nd</sup> Annual Meeting of the Canadian Barcode of Life Network Symposium. April 28 2008. Royal Ontario Museum, Toronto, Ontario, Canada.
40. Smith M. Alex. (2008) A comparative approach to species discovery, diversity estimates and new ecological tools through integrated evolutionary ecology, genomics and barcoding. CRC Tier II Job Search: Phylogenomics. April 21, 2008, University of Manitoba, Winnipeg, Canada

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41. Smith M. Alex. (2008) Species discovery, diversity estimates and spatial ecology through integrating environmental biology, evolution and molecular ecology: a comparative approach. Environmental Biology Job Search. April 19, 2008 Ryerson University, Toronto, Canada
42. Smith M. Alex. (2008) Conserving species and spaces in a barcoded world. The American Natural History Museum, March 7, 2008 New York, NY, USA.
43. Smith M. Alex. (2008) What we learn from DNA barcoding hyper-diverse parasitoid insect communities. February 25 2008. Department of Entomology, University of Illinois, Campaign-Urbana, Illinois, USA
44. Smith M. Alex. (2008) A COI DNA barcode is a sufficient lens to initiate species discovery: case studies in hyper-diverse parasitoid assemblages. January 12 2008. The Plant & Animal Genome XVI Conference. San Diego, California, USA [talk cancelled due to illness]
45. Smith M. Alex. (2007) Conserving species and spaces in a barcoded world. September 29 2007. The 3rd International Conservation Genetics Symposium (ConsGen3) – The American Natural History Museum, New York, NY, USA.
46. Smith M. Alex. (2007) Barcode of Life Data Systems (BOLD). First Workshop of the Leading Labs Workshop. July 10 2007. Smithsonian National Museum of National History, Washington DC, USA.
47. Smith M. Alex. (2007) Barcoding the parasitic Hymenoptera of Churchill. First Workshop of the International effort to barcode polar life (POLARBOLI). June 17 2007. Guelph, Ontario, Canada.
48. Smith M. Alex. (2007) Integrative ecology: examples with ants and flies. Presented to the Biology Department of Wilkes University. Biology Search. February 22 2007, Wilkes Pennsylvania, USA.
49. Smith M. Alex. (2007) DNA barcoding and invasive species: challenges and opportunities. Presented to the 18<sup>th</sup> USDA Interagency Research Forum on Invasive Species. January 11 2007, Annapolis, Maryland, USA.
50. Smith M. Alex. (2006) Integrative ecology: examples with amphibians, ants and flies. Presented to the Biology Department of Cape Breton University. Biology Search. March 22, 2006, Sydney, Nova Scotia, Canada.
51. Smith M. Alex. (2006) Integrative ecology: examples with amphibians, ants and flies. Presented to the Biology Department of Trent University. Biology Search. March 20, 2006, Peterborough, Ontario, Canada.
52. Smith M. Alex. (2005) DNA barcodes facilitate species inference and estimation of diversity in Hymenoptera. Canadian Barcode of Life Network (BOL.ca) Launch. May 5, 2005, Guelph, Ontario, Canada.
53. Smith M. Alex. (2005) Using DNA barcodes to identify biodiversity on agricultural lands. Assessing Biodiversity on Agricultural Lands: AAFC Environmental Farm Planning Initiative. March 7-8, 2005, Mississauga, Ontario, Canada.
54. Smith M. Alex. (2005) Examples of integrative ecology with amphibians and ants. Presented to the Biology Department of Brandon University. CRC Tier II Environmental Biology Search. January 21, 2005, Brandon, Manitoba, Canada.
55. Smith M. Alex. (2002) Population ecology and phylogeography of a threatened amphibian at the edge of its distribution. Presented at the Trent University Biology Department Seminar Series. November 13, 2002, Peterborough, Ontario, Canada.
56. Smith M. Alex. (2002) Metapopulation biology of the Fowler's toad (*Bufo fowleri*). Presented at Ontario Universities Field Course: "Life on the Edge: Wetland and Littoral Ecosystems"

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hosted by the Oliver Centre at Trent University. August 27, 2002, Bobcaygeon, Ontario, Canada.

### PRESENTATIONS (students bold) (89)

1. Smith, M. A. (2016). When ants get up; they sure get brown. ENTOMOLOGICAL SOCIETY OF ONTARIO ANNUAL GENERAL MEETING. Sault Ste. Marie, Ontario. September 2016.
2. Dolson, S., Loewen, E., and M. A. Smith (2016) Staphylinid diversity across a Neotropical elevation gradient. ENTOMOLOGICAL SOCIETY OF ONTARIO ANNUAL GENERAL MEETING. Sault Ste. Marie, Ontario. September 2016.
3. Loewen, E., Dolson, S. and M. A. Smith (2016) An investigation of Staphylinidae functional diversity along a neotropical elevation. ENTOMOLOGICAL SOCIETY OF ONTARIO ANNUAL GENERAL MEETING. Sault Ste. Marie, Ontario. September 2016.
4. Smith, M. Alex (2016). The phylogenetic and morphometric diversity of Neotropical arthropods across an elevational gradient. Canadian Society for Ecology and Evolution (CSEE) Annual General Meeting July 9, 2016, St. John's Newfoundland
5. **Sarah Dolson** and M. Alex Smith (2016). Spider diversity and phylogenetic structure across a Neotropical elevation gradient. OE3C. Toronto, Ontario
6. **Kelsey Jones**, S. Jacobs and M. Alex Smith. Staphylinidae (Coleoptera) Across a Neotropical Elevation Gradient: Changes in Abundance and Diversity. OE3C. Toronto, Ontario
7. Smith, M. Alex; Fernandez-Triana, J., **Megan McPhee**, **Kate Pare**, Rodriguez, J., **Richard, Ellen**, **Warne C.**, Hallwachs W., Whitfield J., and D. H. Janzen (2015) Elevation, crypsis and phylogenetic community structure of Neotropical arthropods. Entomological Society of Canada - Annual General Meeting. November 8-11 2015.
8. **Kelsey Jones** and M. Alex Smith (2015) Diversity of rove beetles along an elevational gradient. Entomological Society of Canada - Annual General Meeting. November 8-11 2015.
9. **Anna M. Solecki** , **Cristina Garrido Cortes**, **Natasha Welch**, **Ellen Richard**, **Chelsie Xavier-Blower**, **Carolyn Trombley**, **Simonne Clout**, and M. Alex Smith (2015) Is Forestry Impacting Dipteran Communities In Algonquin Park? Entomological Society of Canada - Annual General Meeting. November 8-11 2015.
10. **Solecki, AM**, Skevington, JH, Buddle, CM, Smith, M. Alex, Wheeler, TA Phylogeography of Diptera in northern North American glacial refugia. Entomological Society of Canada - Annual General Meeting. November 8-11 2015.
11. **Stefaniya Kamenova** and M. Alex Smith (2015) DNA-based methods of understanding the trophic ecology of the predators of the spruce budworm. Entomological Society of Canada - Annual General Meeting. November 8-11 2015.
12. **Aaron Fairweather**, Donald McAlpine and M. Alex Smith (2015) The effect of anthropogenic disturbance on diversity and phylogenetic structure of ants. Entomological Society of Canada - Annual General Meeting. November 8-11 2015.
13. **Chris Ho** and M. Alex Smith (2015). Impacts of anthropogenic disturbance on arthropod biodiversity and community structure in protected areas. Entomological Society of Canada - Annual General Meeting. November 8-11 2015.
14. Smith, M. Alex; Fernandez-Triana, J., **Megan McPhee**, **Kate Pare**, Rodriguez, J., **Richard, Ellen**, **Warne C.**, Hallwachs W., Whitfield J., and D. H. Janzen (2015) Elevation, crypsis and phylogenetic community structure of Neotropical arthropods. Entomological Society of Ontario - Annual General Meeting. September 18-20 2015.
15. **Ellen Richard\***, **Chelsie Xavier-Blower\***, **Cristina Garrido Cortes**, **Natasha Welch**, **Anna Solecki**, **Carolyn Trombley**, **Simonne Clout** and M. Alex Smith (2015) Is Forestry Impacting



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- Dipteran Communities in Algonquin Park? Part I: Abundance and Diversity. Entomological Society of Ontario - Annual General Meeting. September 18-20 2015.
16. **Cristina Garrido Cortes\***, **Natasha Welch\***, **Ellen Richard**, **Chelsie Xavier-Blower**, **Carolyn Trombley**, **Simonne Clout**, **Anna M. Solecki** and M. Alex Smith (2015) Is Forestry Impacting Dipteran Communities In Algonquin Park? Part II: Body Size Entomological Society of Ontario - Annual General Meeting. September 18-20 2015.
  17. **Aaron Fairweather**, Donald McAlpine and M. Alex Smith (2015) The effect of anthropogenic disturbance on diversity and phylogenetic structure of ants. Entomological Society of Ontario - Annual General Meeting. September 18-20 2015.
  18. **Chris Ho** and M. Alex Smith (2015). Impacts of anthropogenic disturbance on arthropod biodiversity and community structure in protected areas. Entomological Society of Ontario - Annual General Meeting. September 18-20 2015.
  19. Smith, M. Alex; **Megan McPhee**, **Kate Pare**, **Richard**, **Ellen**, **Connor Warne**, W. Hallwachs and D. H. Janzen (2015) Elevation, crypsis and phylogenetic community structure of Neotropical arthropods. Barcodes to Biomes 6th International Barcode of Life Conference. Aug 18 - 21 2015
  20. **Pare, K.** and M. Alex Smith By-passing the taxonomic impediment in Neotropical Collembola to measure changes in diversity and phylogenetic structure. Barcodes to Biomes 6th International Barcode of Life Conference. Aug 18 - 21 2015
  21. **Fairweather, A.**, McAlpine D., and M. Alex Smith The effect of anthropogenic disturbance on diversity and phylogenetic structure of ants (Hymenoptera: Formicidae). Barcodes to Biomes 6th International Barcode of Life Conference. Aug 18 - 21 2015
  22. **Ho, C.** and M. Alex Smith Impacts of anthropogenic disturbance on arthropod biodiversity and community structure. Barcodes to Biomes 6th International Barcode of Life Conference. Aug 18 - 21 2015
  23. **Solecki, AM**, Skevington, JH, Buddle, CM, Smith, M. Alex, Wheeler, TA Phylogeography of Diptera in northern North American glacial refugia. Barcodes to Biomes 6th International Barcode of Life Conference. Aug 18 - 21 2015
  24. Smith M Alex, **Biega A**, Hallwachs W, and Janzen DH. Neotropical sodium gradients - the role of elevation, the effects on ants. Canadian Society of Ecology & Evolution. Saskatoon SK, May 21-25, 2015
  25. **Ho, C.** and M. Alex Smith (2015) Impacts of anthropogenic disturbance on arthropod biodiversity and community structure. OE3C May 13-15 2015. York University
  26. M. Alex Smith (2014) Elevation and the phylogenetic diversity of neotropical insects. Entomological Society of Canada, Saskatoon, September 2014
  27. M. Alex Smith (2014) Elevation and the phylogenetic diversity of neotropical insects. Genomes to Biomes - 1st joint meeting of the Canadian Society of Ecology & Evolution (CSEE), the Canadian Society of Zoology (CSZ) and the Society of Canadian Limnologists (SCL). May 29. Montreal Quebec
  28. **Kate Pare** and M. Alex Smith (2014) Effects of habitat complexity and community structure on Collembola diversity along an elevational gradient. Genomes to Biomes - 1st joint meeting of the Canadian Society of Ecology & Evolution (CSEE), the Canadian Society of Zoology (CSZ) and the Society of Canadian Limnologists (SCL). May 29. Montreal Quebec [poster]
  29. M. Alex Smith (2014) Elevation and the phylogenetic diversity of neotropical insects. 44<sup>th</sup> Ontario Ecology, Ethology, and Evolution Colloquium. May 09. Guelph Ontario

## M. ALEX SMITH – CV

30. **Kate Pare** and M. Alex Smith (2014) Effects of habitat complexity and community structure on Collembola diversity along an elevational gradient. 44<sup>th</sup> Ontario Ecology, Ethology, and Evolution Colloquium. May 09. Guelph Ontario
31. **Thanushi Eagalle** and M. Alex Smith (2014) Latitudinal effects on diversity and body size: a case study with parasitoid wasps. University of Guelph College of Biological Sciences Graduate Student Symposium. April 28, 2014. (poster)
32. **Kate Pare** and M. Alex Smith (2014). Effects of habitat complexity and community structure on Collembola diversity along an elevational gradient. University of Guelph College of Biological Sciences Graduate Student Symposium. April 28, 2014.
33. **Daniel Gibson** and M. Alex Smith (2014) Phylogenetic Host-Parasite Specificity in Aphids of Churchill. Ontario Biology Day (OBD) March 22-23. University of Toronto Mississauga [poster].
34. Smith, M. Alex, W. Hallwachs and D.H. Janzen (2013) This is a polar bear: high elevation neotropical ants in a changing climate. 150<sup>th</sup> anniversary Entomological Society of Canada and Entomological Society of Ontario. University of Guelph. October 20 2013. [talk]
35. Smith, M. Alex, (2013) New Technologies for Investigating Old Ecological Problems – Summing up & Round Table Discussion. 150<sup>th</sup> anniversary Entomological Society of Canada and Entomological Society of Ontario. University of Guelph. October 20 2013. [talk]
36. **Thanushi Eagalle** and M. Alex Smith. Latitudinal effects on diversity and body size: a case study with parasitoid wasps (Ichneumonidae) 150<sup>th</sup> anniversary Entomological Society of Canada and Entomological Society of Ontario. University of Guelph. October 20 2013. [poster]
37. M. Alex Smith, Winnie Hallwachs, Daniel H. Janzen. Diversity and phylogenetic community structure of ants along a neotropical elevational gradient measured with DNA barcodes and a multi-gene phylogeny. Canadian Society of Zoologists - Annual Meeting, Guelph, Ontario, May 13-17, 2013. [talk]
38. **Connor Warne**, M. Alex Smith – Neotropical ant community structure and diversity dynamics along an elevation gradient. Canadian Society of Zoologists - Annual Meeting, Guelph, Ontario, May 13-17, 2013. [talk]
39. **Fiona Tsoi** and M. Alex Smith – A *Wolbachia* survey of Madagascar ants. Canadian Society of Zoologists - Annual Meeting, Guelph, Ontario, May 13-17, 2013. [talk]
40. **Laura M. Trout** and M. Alex Smith – The accuracy of extinction estimates and effectiveness of conservation in Canada. Canadian Society of Zoologists - Annual Meeting, Guelph, Ontario, May 13-17, 2013. [talk]
41. **Connor Warne**, M. Alex Smith – Neotropical ant community structure and diversity dynamics along an elevation gradient. The 9<sup>th</sup> Annual CBS Graduate Student Symposium April 25, 2013, Guelph, Ontario. [talk]
42. Thibaud Decaens, David Porco, Samuel James, M. Alex Smith, Rodolphe Rougerie, Mehrdad Hajibabaei. Barcoding the underground – recent advances and new prospects for the study of soil animal biodiversity. XVI – ICSZ International Colloquium on Soil Zoology. University of Coimbra, Portugal, August 6<sup>th</sup> 2012. [talk]
43. **Connor Warne**, M. Alex Smith (2012). Neotropical ant community structure and biodiversity dynamics along an elevation gradient. First Joint Congress on Evolutionary Biology. Ottawa Ontario Canada. July 6-10 2012. [talk]
44. **Fiona Tsoi**, Brian L. Fisher, M. Alex Smith (2012) A survey of *Wolbachia* infection in Madagascar ant species and their influence on host population structure. First Joint Congress on Evolutionary Biology. Ottawa Ontario Canada. July 6-10 2012. [talk]

## M. ALEX SMITH – CV

45. **Connor Warne**, M. Alex Smith (2011). Neotropical ant community structure and biodiversity dynamics along an elevational gradient. – 1<sup>st</sup> Meeting of the iACG Research Group, Park Nacional, Santa Rosa, Liberia, Costa Rica 23<sup>rd</sup> May 2012. [poster]
46. **Heather Coatsworth**, M. Alex Smith (2011). Guide to the ant genera of the Area de Conservacion de Guanacaste - 1<sup>st</sup> Meeting of the iACG Research Group, Park Nacional, Santa Rosa, Liberia, Costa Rica 23<sup>rd</sup> May 2012. [poster]
47. **Connor Warne**, M. Alex Smith (2011). Neotropical ant community structure and biodiversity dynamics along an elevation gradient. 8<sup>th</sup> Annual College of Biological Science Graduate Student Symposium, Guelph, Ontario, Canada. April 30th, 2012. [talk]
48. **Fiona Tsoi**, Brian L. Fisher, M. Alex Smith (2012) A survey of *Wolbachia* infection in Madagascar ant species and their influence on host population structure. 8<sup>th</sup> Annual College of Biological Science Graduate Student Symposium, Guelph, Ontario, Canada. April 30th, 2012. [talk]
49. **Fiona Tsoi**, Brian L. Fisher, M. Alex Smith (2011) When ants disperse: resulting trends and genetic implications. Fourth International Meeting of the Barcode of Life. Adelaide, Australia, November 2011. [poster]
50. **Ariel Levitsky** Brian L. Fisher and M. Alex Smith (2011) The utility of DNA barcoding in the exploration of species interactions. Fourth International Meeting of the Barcode of Life. Adelaide, Australia, November 2011. [poster]
51. **Connor Warne**, M. Alex Smith (2011). Neotropical ant community structure and biodiversity dynamics along an elevational gradient. Fourth International Meeting of the Barcode of Life. Adelaide, Australia, November 2011.[poster]
52. **Fiona Tsoi**, Brian L. Fisher, M. Alex Smith (2011) When ants disperse: resulting trends and genetic implications. 148<sup>th</sup> Annual Meeting of the Entomological Society of Ontario, St. Catherines Ontario, October 2011. [poster]
53. **Ariel Levitsky** Brian L. Fisher and M. Alex Smith (2011) The utility of DNA barcoding in the exploration of inter-specific relationships. 148<sup>th</sup> Annual Meeting of the Entomological Society of Ontario, St. Catherines Ontario, October 2011.[talk]
54. **Connor Warne**, M. Alex Smith (2011). Neotropical ant community structure and biodiversity dynamics along an elevational gradient. 148<sup>th</sup> Annual Meeting of the Entomological Society of Ontario, St. Catherines Ontario, October 2011 [poster]
55. **Paulson des Brisay**, Gary J. Umphrey, M. Alex Smith (2011). The transcontinental ant: *Tapinoma sessile* phylogeography. 148<sup>th</sup> Annual Meeting of the Entomological Society of Ontario, St. Catherines Ontario, October 2011 [poster]
56. Jan Hrcek, John Kress, Scott E. Miller, Vojtech Novotny, M. Alex Smith, George D. Weiblen, David Erickson (2011) Molecular identification allows inclusion of predators into a plant-caterpillar-parasitoid food web. Entomological Society of America. December 2011. (Presented by Jan Hrcek).
57. D. H. Janzen & 34 others. (2011). Reconstructing tropical biodiversity with DNA data and its implications for conservation. Entomological Society of America. December 2011. (Presented by Dan Janzen).
58. J. Rodriguez, M. Alex Smith, J. Whitfield, W. Hallwachs, DH Janzen. Phylogenies, foodwebs and finding them all: integrating approaches to explore the diversity of parasitoid wasps. Evolution 2010: the joint annual meeting of the Society for the Study of Evolution (SSE), the Society of Systematic Biologists (SSB), and the American Society of Naturalists (ASN)Portland Oregon. June 25 2010 [By Josephine Rodriguez]
59. M. Alex Smith, Jose L. Fernández-Triana, Kees van Achterberg, Henri Goulet, Winnie Hallwachs, Jan Hrcek, John T. Huber, Daniel H. Janzen, Scott Miller, Donald Quicke,

## M. ALEX SMITH – CV

- Josephine Rodriguez, Michael J. Sharkey, Darren Ward, James B. Whitfield, Alejandro Zaldivar, Paul D. N. Hebert. An inordinate fondness for parasitoid wasps: DNA barcoding data from a global array of projects. International Society of Hymenopterists International Meeting. Keszeg, Hungary. June 2010 [by Jose Fernandez-Triana].
60. Chesters, D., Vogler, A.P., Smith, M. Alex, Janzen, D.H., Hallwachs, W., Triana Fernandez, J., Laurenne, N. M., Zaldivar-Riveron, A., Shaw, M.R. , Broad, G.R., Klopstein, S., Shaw, S.R., Hrccek, J., Hebert, P.D.N., Miller, S., Rodriguez , J., Whitfield. J., Sharkey, M. J., Gauld, I.D. [deceased], Quicke, D.L.J. Beyond the barcode to the tree: Ichneumonoid phylogeny and the importance of taxon sampling density and strategy. International Society of Hymenopterists International Meeting. Keszeg, Hungary. June 2010 [by Douglas Chesters].
  61. Rodolphe Rougerie, M. Alex Smith, Jose Fernandez-Triana, Carlos Lopez-Vaamonde, Sujeevan Ratnasingham, Paul D.N. Hebert. Post-metamorphosis persistence of host-DNA in the gut-contents of parasitoid wasps. ECBOL2: 2010 International Year of Biodiversity (2nd Conference of the European Consortium for the Barcode of Life) 2 - 4 June 2010 Braga, Portugal. [by Rodolphe Rougerie].
  62. M. Alex Smith and Fisher, B. L. (2009) Applications to biodiversity conservation. Entomological Society of America December 15, 2009 [by Brian Fisher].
  63. Rodriguez, J. J., M. Alex Smith, Janzen, D. H., Hallwachs, W., and Whitfield, J. B (2009). Evolutionary patterns in host use by *Apanteles* parasitoid wasps. Entomological Society of America December 16, 2009 [by Josephine Rodriguez]
  64. Fisher, B. L., and M. Alex Smith. (2009) Identifying cryptic invasives in the Malagasy region. Third International Barcode of Life Meeting, Mexico City, Mexico. November 10 2009. [by Brian Fisher].
  65. Crozier, R. H., M. Alex Smith, Agapow, P-M. (2009) Ants, phylogenetic biodiversity assessment and conservation. Joint Conference: Australian Entomological Society's 40th AGM and Scientific Conference/9th Invertebrate Biodiversity and Conservation Conference/Society of Australian Systematic Biologists. September 2009. [by Ross Crozier].
  66. Smith, M. Alex, Jose Fernandez, Rob Roughley, Paul Hebert. (2008). Progress on barcoding parasitic wasps (Hymenoptera) from Churchill, Canada, and its implication for biodiversity and ecosystems studies within the Arctic. International Arctic Change 2008. Quebec City, Quebec, December 5, 2008. [poster]
  67. Jose Fernandez, M. Alex Smith, Henri Goulet, Caroline Bouderault and Paul Hebert (2008). Combining barcoding and traditional taxonomy to study the diversity of Microgasterinae wasps (Hymenoptera: Braconidae) in Arctic North America. International Arctic Change 2008. Quebec City, Quebec, December 5, 2008. [By Jose Fernandez]
  68. Smith, M. Alex. (2008). Extreme diversity of tropical parasitoid wasps exposed by iterative integration of natural history, DNA barcoding, morphology, and collections. Joint Meeting of the Entomological Societies of Canada and Ontario. Ottawa, Ontario. October 19, 2008.
  69. Smith, M. Alex. (2008). CO1 DNA barcoding amphibians: successes and failures. 88<sup>th</sup> annual meeting of the American Society of Ichthyologists and Herpetologists. Montreal, Quebec. July 24, 2008.
  70. Smith M. Alex. (2008) A barcoding hyper-diverse parasitoid insect communities. BEPAR Genetics and Genomics of Parasitic Insects. June 5-6 2008. University of Edinburgh, Edinburgh, UK.
  71. Crozier, R. H., Agapow, P. M., and M. Alex Smith Crozier, R. H. (2008). Conservation genetics: from species to habitats. 9th Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity. Bonn Germany. 12 – 16 May 2008 [by Ross Crozier].

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72. Rodriguez, J. J., Whitfield, J. B., Janzen, D. H., and M. Alex Smith. (2007). Host parasitoid specialization, species richness and diversification of *Apanteles* wasps (Braconidae: Microgastrinae). Entomological Society of America December 11, 2007 San Diego, CA [by Josephine Rodriguez]
73. Fisher, B. L., and M. Alex Smith. (2007). Transforming taxonomy for effective biodiversity assessment of arthropods in Madagascar. 2<sup>nd</sup> International Barcode of Life Conference. Sept 18 – 20 2007 Taipei, Taiwan [by Brian Fisher]
74. Janzen, D. H., Hallwachs, W., Hajibabaei, M., Burns, J. M., Smith, M. Alex, Rodriguez, J. J., Wood, M., Dapkey T., and PDN Hebert. (2007). Ecological inventory with a barcoder, the ecological taxascope: who eats what in a complex tropical forest. 2<sup>nd</sup> International Barcode of Life Conference. Sept 18 – 20 2007 Taipei, Taiwan [by Dan Janzen]
75. Fisher, B. L. and Smith M. Alex (2007). Transforming taxonomy for effective biodiversity assessment of ants in Madagascar. 9<sup>th</sup> Annual Bay Area Conservation Biology Symposium. Saturday, February 10<sup>th</sup>, 2007 at UC Berkley. [by Brian Fisher]
76. Woodley, N. Smith, M. Alex, Hallwachs, W. Janzen, D. H. Hebert, P. (2006) DNA barcodes reveal cryptic host-specificity within the presumed polyphagous members of a genus of parasitoid flies (Diptera: Tachinidae). Sixth International Congress of Dipterology, Fukuoka, Japan, 23<sup>rd</sup> September 2006. [by Norman Woodley]
77. Fisher, B. L. and Smith M. Alex (2006). The use of DNA barcoding for effective biodiversity assessment of ants in Mauritius. Invited Symposia. The International Union for the Study of Social Insects Congress. July 30<sup>th</sup> 2006, Washington DC, USA. [by Brian Fisher].
78. Smith M. Alex, Fisher, B. L., and Hebert, P.D. N. (2006). Biodiversity assessment of a hyperdiverse arthropod group: DNA barcoding the ants of Madagascar. Peter Yodzis Colloquium in Fundamental Ecology "Biodiversity, Structure, and Function" May 17<sup>th</sup> and 18<sup>th</sup>, 2006. University of Guelph - Guelph Ontario – Canada. Poster.
79. Fisher, B. L., Smith M. Alex, and Hebert, P.D. N. (2006). Biodiversity assessment of a hyperdiverse arthropod group: DNA barcoding the ants of Madagascar. 8th Annual Bay Area Conservation Biology Symposium. Saturday, February 4<sup>th</sup>, 2006 at San Francisco State University. [by Brian Fisher]
80. Smith M. Alex, Fisher, B. L., and Hebert, P.D. N. (2005). Biodiversity assessment of a hyperdiverse arthropod group: DNA barcoding the ants of Madagascar. Presented at the Eleventh meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) – Secretariat of the Convention on Biological Diversity – Montreal, Canada, 28 November 2005 – Poster.
81. Smith M. Alex, Fisher, B. L., and Hebert, P.D. N. (2005). Using DNA barcodes to rapidly quantify the ant biodiversity in Madagascar. Presented at the Annual Meeting of the Ecological Society of America. Montreal, Quebec. 7-12 August 2005.
82. Smith M. Alex, and Green, D. M. (2005) Complex phylogeography of *Bufo fowleri* at its northern range limit. Presented at the Annual Meeting of Ichthyologists and Herpetologists. Tampa, Florida, 6-11 July 2005. <http://www.asih.org/meetings/2005/abstracts2005pt4.pdf>
83. Smith M. Alex, Umphrey, G. J., Fisher, B. L., and Hebert, P.D. N. (2005). Rapid assessment of ant diversity in a northern World Heritage Site using DNA barcodes. *Poster*. International Conference for the Barcoding of Life, London, England. 6-9 February 2005.
84. Smith M. Alex, and Green, D. M. (2004) Spatial Ecology of *Bufo fowleri*. Presented at the Annual Meeting of the Ecological Society of America. Portland, Oregon. August 1-6 2004.
85. Smith M. Alex, and Green, D. M. (2004) The Dispersal Curve for Fowler's Toad (*Bufo fowleri*). Presented at the Annual Meeting of Ichthyologists and Herpetologists. Oklahoma City, 26 - 31 May 2004.

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86. Smith M. Alex, and Green, D. M. (2002) Dispersal and viability of Fowler's Toads (*Bufo fowleri*) populations in Canada. Presented at the annual meeting of the Canadian Amphibian and Reptile Conservation Network September 27, 2002, Winnipeg, Manitoba. [by David Green].
87. Smith, M. Alex. (2001) What ties things together: the importance of dispersal to the metapopulation ecology and phylogeography of the threatened Fowler's toad (*Bufo fowleri*) in Canada. Presented at the 2001 Redpath Museum Seminar Series, December 16, 2001, Montreal, Quebec.
88. Smith M. Alex, Berrill, M., and Kapron, C. (1999) *In vivo* induced photolyase activity of wood frog embryos. Presented at the annual meeting of the Canadian Amphibian and Reptile Conservation Network October 14-18, 1999. Quebec City, Quebec.
89. Smith, M. Alex, Berrill, M., Kapron, C., and Lean, D.R.S. (1997) Ability to repair damage from ultraviolet-B radiation: photolyase concentrations for amphibians of Ontario. Presented at the 7th annual meeting of the Task Force on Declining Amphibian Populations in Canada. Oct. 3-6, 1997. Wolfville, Nova Scotia.

### FIELD WORK (>30 expeditions and associated outreach)

1. **2017:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica; April, December.
2. **2016:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica; December.
3. **2015:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica; February.
4. **2014:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica; December.
5. **2014:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica; August. <https://sites.google.com/site/acgantcollectionsaugust2014/>
6. **2014:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica; February. <https://sites.google.com/site/acgantcollectionsfeb2014/home>
7. **2013:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica, September/October. <https://sites.google.com/site/acgantcollectionssept2013/>
8. **2013:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica, March/April. <https://sites.google.com/site/acgantcollectionsmar2013/>
9. **2012:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica, November/December. <https://sites.google.com/site/acgantcollectionsdec2012/>
10. **2012:** Arctic Ecology Field Course, two weeks in Churchill Manitoba, July 2012 with 20 students. <http://gigapanmagazine.org/vol5/issue1/>
11. **2012:** Two separate two-week insect collecting expeditions in Algonquin Park, June, 2012. <https://sites.google.com/site/algonquinorg/>
12. **2012:** One week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica, May. <https://sites.google.com/site/acgantcollectionsmay2012/>
13. **2012:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica, February. <https://sites.google.com/site/acgfebruary2012/>
14. **2011:** Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica, November/December. <https://sites.google.com/site/acgdecember2011/>
15. **2011:** Two week insect collecting expedition Algonquin Park, July. <https://sites.google.com/site/algonquinorg/>

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16. **2011**: One week ant collecting expedition to Lamani, Belize, May.
17. **2011**: Two week ant collecting expedition to French Guiana, January/February.  
<https://sites.google.com/site/nouraguescollections2011/>
18. **2011**: One week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica, February. <https://sites.google.com/site/acgantcollectionsfeb2011/>
19. **2010**: Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica, November/December. <https://sites.google.com/site/acgdecembercollections/>
20. **2010**: One week ant collecting expedition to Lamani, Belize April.
21. **2010**: Two week ant collecting expedition to Area de Conservacion Guanacaste, Costa Rica, January.
22. **2009**: Organisation and participation in the BioBus collection trip in National Parks of Eastern Canada (Newfoundland, Nova Scotia and New Brunswick).
23. **2009**: Two week ant collecting expedition to Volcan Cacao, ACG, Costa Rica, March.
24. **2008**: Two week ant collecting expedition to Volcan Cacao, ACG, Costa Rica.
25. **2008**: 4 day ant collecting trip in Rocky Mountain National Park, Colorado.
26. **2007**: 2 week ant collecting trip in Arizona.
27. **2006**: 2 week ant collecting trip in Texas.
28. **2004**: 2 week expedition down the Nahanni River, NWT, Canada. Ant collecting
29. **2002-2007**: Organised and taught field courses on Pigeon Lake, near Bobcaygeon Ontario.
30. **1999 – 2004**: Lake Erie phylogeography study of *Bufo fowleri*. Selected, organised and trained 15 undergraduate student field volunteers, Long Point tip trips.

### POPULAR PRESS AND OUTREACH (>50 articles or interviews, 2007-2016)

#### 2017 –

- University of Guelph, Press Release. Profs Using Social Media to Track Social Insects, Publishing Findings <https://news.uoguelph.ca/2017/05/twitterbugs/>

#### 2016 –

- The Natural Sciences and Engineering Research Council (NSERC) Research News covered our paper on naming wasp for school children. [http://www.nserc-crsng.gc.ca/Media-Media/ResearchNewsDetails-NouvellesSurLaRechercheDetails\\_eng.asp?ID=858](http://www.nserc-crsng.gc.ca/Media-Media/ResearchNewsDetails-NouvellesSurLaRechercheDetails_eng.asp?ID=858)
- University of Guelph, Press Release. Prof Helps Discover 20 Species of Wasps in Costa Rica <http://news.uoguelph.ca/2016/07/prof-helps-discover-20-species-wasps-costa-rica/>
- Joe Pavia (2016) Guelph prof part of team that identified 21 new wasp species in Costa Rica <http://www.cbc.ca/news/canada/kitchener-waterloo/wasps-guelph-costa-rica-1.3679580>
- Live radio interview with Craig Norris, CBC Kitchener Waterloo, The Morning Edition - K-W. 89.1 FM. Friday July 15<sup>th</sup> 2016.
- UofGuelph “In the News” Study on Finding New Wasps Featured by CBC News. <http://news.uoguelph.ca/2016/07/study-finding-new-wasps-featured-cbc-news/>
- Joanne Pearce (2016) A Matter of Facts: DNA barcodes help answer climate change questions. The Ontarian. April 2016 <http://www.theontarian.com/2016/04/dna-barcodes-help-answer-climate-change-questions/>

#### 2015 –

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- Amanda Boyd and Kate Pare (2015) From inquiring students to published authors: an adventure in the Arctic. Official Blog of the Entomological Society of Canada. <https://escsecblog.com/2015/09/29/from-inquiring-students-to-published-authors-an-adventure-in-the-arctic/>
- M. Alex Smith (2015) Missed Mandate, Missed Biology: The ongoing “Mother Canada” debacle in Cape Breton Highlands National Park. The Official Blog of the Entomological Society of Canada <http://escsecblog.com/2015/07/06/missed-mandate-missed-biology-the-ongoing-mother-canada-debacle-in-cape-breton-highlands-national-park/>

### 2014 –

- “At Guelph” article on Ecography paper: <http://news.uoguelph.ca/2014/10/the-ants-go-marching-higher-in-costa-rica/>
- M. Alex Smith (2014) Ecography Blog: Journal blog describing our work published in the August 2014 volume: <http://www.ecography.org/blog/diversity-and-phylogenetic-community-structure-ants-along-costa-rican-elevational-gradient>
- Guelph Mercury and At Guelph articles regarding ERA award ([http://www.uoguelph.ca/news/2014/03/three\\_professors\\_win\\_early\\_researcher\\_awards.html](http://www.uoguelph.ca/news/2014/03/three_professors_win_early_researcher_awards.html))

### 2013–

GigaPan.com "Photographer Spotlight" <http://gigapan.com/cms/about/photographer-spotlight-alex-smith-his-ecology-research>

CFRU (93.3FM) radio program “Our Planet Sings”, presents a talk I delivered to the Guelph Field Naturalists. <http://www.cfru.ca/recordings/157>. Two programs (April 12, April 19, 2013)

“At Guelph” article on Arctic Ecology 2012 GigaPan Magazine volume co-authored with S. Adamowicz and 19 undergraduate students: <http://atguelph.uoguelph.ca/2013/04/field-trip-leads-to-close-encounters-with-wildlife/>

Sci-news.com article on “New Wasp Species Named After Character in Quentin Tarantino’s Film” <http://www.sci-news.com/biology/article00947.html>

Area de Conservacion de Guanacaste (ACG) national park in Costa Rica includes a section on my GigaPans on their website: <http://www.acguanacaste.ac.cr/galeria/acg-gigapan>

The Canadian Society of Zoologists meeting “Zoology for a Better Planet” website features Dairy Bush GigaPans: <http://cszmeeting.ca/2013/> .

### 2012–

120618 – phone interview with NPR reporter Katie Zack (Pittsburgh NPR station, WESA, Essential Public Radio,) re. the Nearby Nature II GigaBlitz (<http://www.essentialpublicradio.org/story/2012-06-18/third-nature-gigablitz-where-photography-and-biology-combine-11462> )

120613 – Eureka press release re. GigaBlitz Nearby Nature II. [http://www.eurekaalert.org/pub\\_releases/2012-06/cmu-cst061312.php](http://www.eurekaalert.org/pub_releases/2012-06/cmu-cst061312.php)

CFI Research In Action stories: Democratizing Biology by Arielle Ross June 2012: <http://innovation.ca/en/ResearchInAction/ImpactStory/Democratizingbiology>

Guelph Mercury reports on my participation in the University of Guelph's Philopolis in a session on the "Species Problem" <http://www.guelphmercury.com/news/local/article/681219--philosophy-conference-debates-challenges-of-classifying-life-forms>

### 2011 –

OnEarth Magazine focuses on my use of GigaPan in the tropics and the Nearby Nature GigaBlitz: Burdick, A. 2011 Moment, magnified. onearth magazine (Dec 16 2011) <http://www.onearth.org/article/moment-magnified>



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“At Guelph” reports on the Nearby Nature GigaBlitz: Vowles, A., 2011. Online Magazine Features Nearby Nature. <http://atguelph.uoguelph.ca/2011/11/online-magazine-features-nearby-nature/>

“At Guelph” reports on research in the Dairy Bush: Vowles, A. 2011. Dairy Bush Takes Learning Outside. <http://atguelph.uoguelph.ca/2011/12/dairy-bush-takes-learning-outside/>

Earth Day focus in “At Guelph” on my research: <http://atguelph.uoguelph.ca/2011/04/gigapan-celebrates-earth-day-with-u-of-g-prof%E2%80%99s-imagery/>

Conservation Magazine focus on my use of GigaPans in the tropics: <http://www.conservationmagazine.org/2011/06/ultra-zoom/>

At Guelph article focuses on PLoS ONE article on foodweb barcoding: <http://atguelph.uoguelph.ca/2011/08/genetic-studies-aimed-at-protecting-natural-resources/>

Nearby Nature GigaBlitz: science.gigapan.org, <http://gigapanmagazine.org>

### 2010 –

GigaPan work featured in Science: Frenkel KA 2010 Panning for Science. Science 330:748-749.

Reuters article about how DNA barcoding aims to protect species was featured in international and national news reports; Armstrong, N. 2010: DNA barcoding aims to protect species and food.

GigaPan article featured in the iBOL bulletin. (<http://www.ibol.org/gigapan>)

GigaPans featured on the GigaPan homepage.

Dairy Bush GigaPan featured in GigaPan Magazine, Vol 2 Issue 5: Science and Society.

"At Guelph" article about the Costa Rica ant and GigaPan Projects: “Biologist Zooms In on Ants and Other Species”. <http://news.uoguelph.ca/2010/05/biologist-zooms-in-on-ants-and-other-species/>

FOFS GigaPan blog about the Dairy Bush GigaPan project

Guelph Tribune article about the Dairy Bush GigaPan project and the BIObus.

<http://www.guelphtribune.ca/news/camera-mount-gets-big-picture-smallest-details/>

Science - News Focus (100110) - "The Little Wasp That Could" by Elizabeth Pennisi.

<https://www.sciencemag.org/content/327/5963/260>

Ontario Ministry of Research and Innovation video story on BIO and DNA barcoding.

Dairy Bush GigaPan series featured on GigaPan home page "Snow" collection

Lead introduction to biodiversity and barcoding talks and workshops for BIO visitors, students and high school students (~1/fortnightly).

### 2009 –

Segment on Discovery Channel’s ‘Daily Planet’ program for segment celebrating Darwin’s 200<sup>th</sup> birthday, February 12<sup>th</sup>.

"Anti-aquatic antics of ants" - Globe and Mail - Collected Wisdom, 07/02/09 page A19. - Ant strategies for surviving floods and snow.

"Discarding the future" - Globe and Mail - Letter to the Editor, 30/01/09 page A12. - Regarding contributions to science contained in the 2009 budget.

Lead introduction to biodiversity and barcoding workshops for UNIV first year students and high school students (~1/fortnightly).

### 2008 –

Led introduction to biodiversity and barcoding workshops for students, teachers and philanthropic guests of the University President’s Office (~1/month).

### 2007 –

Participated in two professional development days organised for science teachers from the Upper Grand River Board of Education.

## M. ALEX SMITH – CV

- Taped interview with journalist from 'The Scientist' magazine for a central piece in their December 2007 edition on DNA barcoding (October)
- Live phone interview about DNA barcoding on, "The Rutherford Show", News Talk CHQR – Calgary, Alberta, Canada. (Sept 25)
- Live phone interview about DNA barcoding on, "On the QT with Scott Williams", Q102 - Dublin, Ireland (Sept 20)
- Live phone interview about DNA barcoding on, "ABC 936 Breakfast with Andy Muirhead", Hobart, Tasmania, Australia. (Sept 19)
- Phone interview with NewScientist.com news service regarding cryptic species research ([www.newscientist.com/article/dn12293-hidden-species-may-be-surprisingly-common.html](http://www.newscientist.com/article/dn12293-hidden-species-may-be-surprisingly-common.html)) (July 19)
- Interview with anthropologists from Lancaster University conducting a, 'sociological and anthropological study of a real-time shift in the taxonomic sciences' and how that affects and is affected by, DNA barcoding. (July 10)

### 2006 –

- Facilitation of SPARK student authors writing "Focus On": DNA barcoding magazine: ([www.uoguelph.ca/research/publications/Assets/PDF/FocusOn/Focus\\_On\\_DNA.pdf](http://www.uoguelph.ca/research/publications/Assets/PDF/FocusOn/Focus_On_DNA.pdf)). (November)
- Phone interview with Discover Magazine regarding DNA barcoding the ants of Madagascar.

### PROFESSIONAL SOCIETIES AND SERVICES

- Canadian Society for Ecology and Evolution (CSEE)
- Fowler's Toad Recovery Team – Science advisor.
- Biological Survey of Canada Executive Council (2013-2015).
- The Biota of Canada (BoC) (Working group and project of the BSC – 2014)
- The Systematics Association – Full member
- Entomological Society of Ontario (Director 2015-2017)
- Entomological Society of Canada
- Entomological Society of America
- Ecological Society of America – Full member, Canadian Chapter (lapsed)
- American Society of Ichthyologists and Herpetologists – Full member (lapsed)

**Academic Editor:** PLoS ONE (2012-2016)

**Reviewer (18):** Myrmecological News, Journal of Animal Ecology, Molecular Ecology, Journal of Biogeography, Canadian Journal of Zoology, Herpetologica, BMC Evolutionary Biology, Biological Conservation, Proceedings of the Royal Society B: Biological Sciences, Frontiers in Zoology, Biology Letters, Animal Conservation, Oecologia, Genetica, Applied Herpetology, Zootaxa, PLoS ONE, Diversity and Distributions, Zookeys, Journal of Insect Conservation, Biotropica, Canadian Entomologist, Proceedings of the National Academy of Science, PeerJ

**Funding Agencies Reviewer (5):** Leverhulme Trust (UK), National Science Foundation (NSF) International Research Fellow Awards (USA), Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant Competition (Canada), NSERC Collaborative Research and Development Grant (CRD), Kentucky Science and Engineering Foundation.