Dr. Isabelle-Anne Bisson
M.Sc., Ph.D.

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Experienced **scientific consultant, coordinator and manager** of science and conservation projects globally for over 15 years. Co-founded a boutique firm that offers consulting services in corporate sustainability. Lead projects for the United States' Department of Defense and headed a program in Uganda for a United States Agency for International Development initiative. Predominantly experienced with projects initiated from the ground up; strong team building capabilities across multiple disciplines and cultural gaps; worked within tight budgets and timelines; strong capacity to adapt to challenging working conditions; co-founder of a company that specializes in corporate sustainability and co-developer of a patent-pending mobile phone application. Fully trilingual in **French, English, and Spanish**.

CAREER ACCOMPLISHMENTS

CO-FOUNDER AND PRESIDENT of TerraHumana Solutions, Montreal, QC.

2014

- TerraHumana Solutions, founded in October 2014, is a boutique firm that offers expert consulting services in sustainability. Our consulting goes beyond "greenwashing", finding solutions to ensure the long-term viability of an orgnaization by solidifying the economic, environmental and social foundations.
- Formal training in Global Reporting Initiate (GRI) received in January 2015.

PROJECT LEADER. Research Associate, Smithsonian Institution, Washington, D.C.

2010-2013

- Initiated and lead the Animal Mortality Monitoring Program (AMMP) in east Africa, a disease awareness network and surveillance program.
- Started program from ground zero, managed a quarter of a million dollar budget.
- Co-developed with an African IT company, *MindAfrica*, a mobile phone application *SI-AMMP* (Smithsonian Institution – Animal Mortality Monitoring Program – patent-pending), which includes crucial tools in disease and conservation surveillance such as SMS alerts and photo capture options.
- Trained over 150 park rangers on how to efficiently use mobile phones for sick or dead animal reporting.
- Built and lead a team of 10 people from different cultures and disciplines to develop an efficient data reporting system.
- Chosen as one of few stories to be included in the Smithsonian's 2012 Annual report.

SCIENTIFIC CONSULTANT. EcoEsperanto Consultancy (now Shearwater Institute), Montreal, QC.

Contract January 2013

- Acted as a scientific consultant on an analysis of Canada's performance on avian conservation in the Americas for the Commissioner of the Environment and Sustainable Development (Office of the Auditor General of Canada).

COMISSIONER. Part-time member by decree for the Bureau d'Audiences Publiques sur l'Environnement (BAPE), Quebec, QC.

4-month mandate in 2012

- Acted as commissioner on a BAPE mandate on the construction of a railroad in the Saguenay region, Québec.

CO-PRINCIPAL INVESTIGATOR. Research Associate, Princeton University, New Jersey.

2006-2009

- Co-lead a Department of Defense funded research (Strategic Environmental Research and Development Program, SERDP) on Fort Hood military installation to assess environmental, munitions, and training impacts on threatened bird species;
- First to successfully mount the smallest heart rate transmitters on an endangered species.
- Trained and supervised highly efficient team to perform sensitive tasks such as transmitter mounting and surveillance on endangered species;
- Co-developed software, *Vireo*, with NOAA (National Oceanic and Atmospheric Association) engineers, to automatically calculate heart rate using heart rate telemetry.
- Interviewed on CBC's Quirks & Quarks for the breakthrough aspects of my research.

ACADEMIC TRAINING

2003-2005	Post-doctoral fellowship, Smithsonian Environmental Research Center, USA.
2004	Ph.D. Evolutionary Biology, York University, Canada.
1996	M.Sc. Avian Conservation, McGill University, Canada & Doñana Biological Station, Spain.
1993	B.Sc., McGill University, Canada.

PUBLICATIONS

1. **Bisson, I.A.**, B.J. Ssebide, M. Driciru, N. Guma, R.O. Okello, P.P. Marra. Using cell phone technology to report animal morbidity and mortality as an early warning system for zoonotic diseases. *In preparation.*

2. **Bisson, I.-A**., B.J. Ssebide, P. P. Marra. 2014. Preventing emerging zoonotics with animal morbidity and mortality monitoring. *EcoHealth* DOI: 10.1007/s10393-014-0988-x.

3. Bureau d'Audiences Publiques sur l'Envirronnement (BAPE). 2012. Report on the *Projet de desserte ferroviaire au terminal maritime de Grande-Anse à Saguenay*. Available: http://www.bape.gouv.qc.ca/sections/rapports/tous/index.htm.

4. L. K. Butler, L. Ries, **I.-A. Bisson**, T. J. Hayden, M. M. Wikelski, L. M. Romero. 2012. Opposite but analogous effects of road density on songbirds with contrasting habitat preferences. *Animal Conservation* DOI: 10.1111/j.1469-1795.2012.00576.x

5. **Bisson, I.-A**., L. K. Butler, P. Kelley, J. Adelman, T.J. Hayden, L. M. Romero, M.C. Wikelski. 2011. Energetic response to human disturbance in an endangered songbird. *Animal Conservation* 14:484-491. DOI: 10.1111/j.1469-1795.2011.00447.x

6. Bowlin, M.S., **I.-A. Bisson**, J. Shamoun-Baranes, J.D. Reichard, N. Sapir, P.P. Marra, T.H. Kunz, D.S. Wilcove, A. Hedenström, C.G. Guglielmo, S. Åkesson, M. Ramenofsky, M. Wikelski. 2010. Grand challenges in migration biology. *Integrative and Comparative Biology* 50:261-279.

7. Robinson, D., Bowlin, M., **I.-A. Bisson**, K. Thorup, R. Diehl, J. Shamoun-Barnes, T. Kunz, S. Mabey, J. Smith, D. Winkler. 2010. Integrating concepts and technologies at the frontiers of animal movements. *Frontiers in Ecology and Environment* 7:354-361 doi:10.1890/080179.

8. Holland, R.A., K. Thorup, A. Gagliardo**, I.-A. Bisson**, E. Knecht, D. Mizrahi, M. Wikelski. 2009. Testing the role of sensory systems in the migratory heading of a songbird. *Journal of Experimental Biology* 212:4065-4071.

9. **Bisson, I.-A.,** K. Safi, R. A. Holland. 2009. Evidence for repeated independent evolution of migration in the largest family of bats. *PloS One* 4(10): e7504. doi:10.1371/journal.pone.0007504.

10. **Bisson, I.-A.,** P.P. Marra, E.H. Burtt, M. Sikaroodi, P.M. Gillevet. 2009. Variation in plumage microbiota depends on season and migration. *Microbial Ecology* 58:212-220.

11. Butler, L. K., **I.-A. Bisson**, M. Romero, T. Hayden, M. Wikelski 2009. Adrenocortical responses to offspring-directed threats in two open-nesting birds. *General and Comparative Endocrinology* 162: 313-318.

12. **Bisson, I.-A**., L. K. Butler, M. Romero, T. Hayden, M. Wikelski. 2008. No energetic cost to human disturbance in a songbird. *Proceedings of the Royal Society B: Biological Sciences.* 276: 961-969. URL 10.1098/rspb.2008.1277

13. Thorup, K., **I.-A. Bisson**, M. S. Bowlin, R. A. Holland, J. C. Wingfield, M. Ramenofsky, M. Wikelski. 2007. Evidence for a navigational map stretching across the continental USA in a migratory songbird. *Proceedings of the National Academy of Sciences USA* 104:18115-18119.

14. **Bisson, I.-A**., P.P. Marra, E.H. Burtt, M. Sikaroodi, P.M. Gillevet. 2007. A molecular comparison of plumage and soil bacteria across biogeographic, ecological, and taxonomic scales. *Microbial Ecology* 54:65-81.

15. Burtt, E.H. Jr., V. Saranathan, **I.-A. Bisson**. 2006. An ecosystem in feathers. *Proceedings for the International Ornithological Congress*, Hamburg, Germany.

16. Ferrer, M., **I.A. Bisson**. 2003. Age and territory-quality effects on fecundity in the Spanish Imperial Eagle. *The Auk* 120:180-186.

17. **Bisson, I.A.,** M. Ferrer, D.M. Bird. 2002. Factors influencing nest-site selection by Spanish imperial eagles. *Journal of Field Ornithology* 73:298-302.

18. **Bisson, I.A.,** B.J.M. Stutchbury. 2000. Nest site selection and productivity by hooded warblers in a fragmented landscape. *Canadian Journal of Zoology* 78: 858-863.

19. **Bisson, I.A.**, B.J.M. Stutchbury, D. Martin. 2000. Acadian flycatcher, *Empidonax virescens*, nest site characteristics at the northern edge of its range. *Canadian Field Naturalist* 114:689-691.

PROFESSIONAL SERVICE & PUBLIC OUTREACH

Invited board member of a local non-profit organization, Table de Quartier Sud de l'Ouest-de-l'île (TQSOI), improving the lives of local citizens (present).
Vice-President of the Fritz Farm Youth Gardening Program Association, a community-based and non-profit association started in 2014 to teach young people how to grow their own food (present).
Elected part-time member *Bureau d'Audiences Publiques sur l'Environnement* (BAPE, present).
Member of the Town of Baie d'Urfé committee on the Emerald Ash Borer (2014).
Elected member of the American Ornithologist's Union
Invited member of the MIGRATE (*Migration Interest Group: Research Applied to Education*) group.
Radio interviews CBC's program *Quirks and Quarks* – 2007 & 2008
News coverage of peer-reviewed article http://news.sciencemag.org/biology/2014/11/better-wildlife-monitoring-could-prevent-human-disease-outbreaks?rss=1 & https://news.vice.com/article/monitoring-sick-animals-in-the-wild-could-be-the-key-to-preventing-the-next-ebola-outbreak