

Joanie Van de Walle, PhD

Postdoctoral Investigator; Woods Hole Oceanographic Institution

Address: Marine Research Facility, Office #241

360 Woods Hole Road, MA, USA, 02543

Email : jvandewalle@whoi.edu, Tel. (774) 255-0568, Languages: French, English

RESEARCH INTERESTS

Population dynamics: mathematical modelling (Leslie projection matrices); demographic projections; impacts of global environmental changes on wild animal population dynamics.

Evolutionary ecology: causes and consequences of variation in life history strategies at the inter- and intra-specific levels; harvest-induced selection

Behavioural ecology: reproduction tactics and strategies; animal personality; life-history trade-offs; parental care; anthropogenic influences

Terrestrial and marine ecology: theoretical and empirical approaches using multiple species from terrestrial and marine systems; mammals and birds

Wildlife management: quantification of the demographic impacts of harvest and wildlife management strategies; indirect effects of hunting

WORK EXPERIENCE IN ACADEMIA

Postdoctoral Investigator Woods Hole Oceanographic Institution, Woods Hole, MA, USA Supervisor: S. Jenouvrier	2021-now
Postdoctoral Fellow (FRQ-NT) Woods Hole Oceanographic Institution, Woods Hole, MA, USA Supervisor: S. Jenouvrier	2020-2021

EDUCATION

Ph.D. in biology – concentration in ecology Université de Sherbrooke, Sherbrooke, Canada Supervisors: F. Pelletier (UdS) and A. Zedrosser (USN)	2015-2020
M.Sc. in biology – marine ecology Université Laval, Québec, Canada Supervisors: G. Beauplet (ULaval) and M. Hammill (DFO)	2010-2013
BSc in biology - concentration in animal ecology Université Laval, Québec, Canada	2006-2009

AWARDS AND DISTINCTIONS

Best PhD thesis Université de Sherbrooke	2021 (4 000 CAD)
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Thesis on the dean's Honors' List Université de Sherbrooke	2020
Excellence Award - publication Center for Northern Studies	2020 (250 CAD)
Excellence Award - publication Center for Northern Studies	2020 (200 CAD)
Excellence Award - publication Center for Northern Studies	2019 (150 CAD)
Research and Creation Award « Hunting regulation favors slow life histories in a large carnivore » Université de Sherbrooke	2019
Scientific Popularization Award Université de Sherbrooke	2019 (600 CAD)
Relève Étoile Louis-Berlinguet Award Fonds de Recherche du Québec	2019 (1 000 CAD)
Excellence Award Quebec Centre for Biodiversity Science	2018 (4 000 CAD)

PUBLICATIONS

Articles under review in peer-reviewed journals

Lassis, R., F. Pelletier, **J. Van de Walle**, and M. Festa-Bianchet. Trophy hunting regulations drive potential genetic rescue from protected areas. Submitted to *Evolutionary Applications*, October 2022.

Articles published in peer-reviewed journals

Van de Walle, J., B. Larue, G. Pigeon, and F. Pelletier. 2022. Different proxies, different stories? Imperfect correlations and different determinants of fitness in bighorn sheep. *Ecology and Evolution*, 12: e9582.

Sun, R., **J. Van de Walle**, S. Patrick, C. Barbraud, H. Weimerskirch, K. Delord, and S. Jenouvrier. 2022. Boldness predicts divorce rates in wandering albatrosses (*Diomedea exulans*). *Biology Letters*, 18: 20220301.

Van de Walle, J., F. Pelletier, A. Zedrosser, J. E. Swenson, S. Jenouvrier, and R. Bischof. 2021. The interplay between hunting rate, hunting selectivity, and reproductive strategies shapes population dynamics of a large carnivore. *Evolutionary Applications*, 14:2414-2432 (DOI: 10.1111/eva.13253).

- Van de Walle, J.**, A. Zedrosser, J.E. Swenson, and F. Pelletier. 2021. Disentangling direct and indirect determinants of the duration of maternal care: environmental context matters. *Journal of Animal Ecology*, 90:376-386 (DOI: 10.1111/1365-2656.13371).
- Van de Walle, J.**, A. Zedrosser, J. E. Swenson, and F. Pelletier. 2020. Trade-off between offspring size and number: the smallest bear the cost. *Biology Letters*, 16:20190707 (DOI: 10.1098/rsbl.2019.0707).
- Van de Walle, J.**, M. Leclerc, S. M. J. G. Steyaert, A. Zedrosser, J. E. Swenson, and F. Pelletier. 2019. Proximity to humans is associated with longer maternal care in brown bears. *Behavioral Ecology and Sociobiology*, 73:158 (DOI : 10.1007/s00265-019-2764-y).
- Gossieaux, P., M. Leclerc, **J. Van de Walle**, Y. Poisson, P. Toni, J. Landes, A. Bourret, D. Garant, F. Pelletier, and M. Bélisle. 2019. Offspring mass variation in tree swallows: a case of bet-hedging? *Ecosphere*, 10:e02607 (DOI : 10.1002/ecs2.2607).
- Van de Walle, J.**, G. Pigeon, A. Zedrosser, J. E. Swenson, and F. Pelletier. 2018. Hunting regulation favors slow life histories in a large carnivore. *Nature Communications*, 9:1100 (DOI: 10.1038/s41467-018-03506-3).
- Frank, S., A. Ordiz, J. Gosselin, A. Hertel, J. Kindberg, M. Leclerc, F. Pelletier, S. M. J. G. Steyaert, O.-G. Støen, **J. Van de Walle**, A. Zedrosser, and J. E. Swenson. 2017. Indirect effects of bear hunting: a review from Scandinavia. *Ursus*, 28:150-164 (DOI: 10.2192/URSU-D-16-00028.1).
- Leclerc, M., **J. Van de Walle**, A. Zedrosser, J. E. Swenson, and F. Pelletier. 2016. Can hunting data be used to estimate unbiased parameter estimates? A case study on brown bears. *Biology Letters*, 12:20160197 (DOI: 10.1098/rsbl.2016.0197).
- Sauvé, C., **J. Van de Walle**, M. O. Hamill, J. P. Y. Arnould, and G. Beauplet. 2014. Stomach temperature records reveals nursing behaviour and transition to solid food consumption in an unweaned mammal, the harbour seal pup (*Phoca vitulina*). *PLoS ONE*, 9:e90329 (DOI : 10.1371/journal.pone.0090329).

TEACHING EXPERIENCE

Lecturer	2019-2020
Class <i>Travaux pratiques d'écologie (ECL307)</i>	
Université de Sherbrooke, Sherbrooke, Canada	
Guest lecturer	2017-2018
Class <i>Conservation et gestion des ressources (ECL-606)</i>	
Université de Sherbrooke, Sherbrooke, Canada	
Teaching assistant	2015-2017
Class <i>Travaux pratiques d'écologie (ECL307)</i>	
Université de Sherbrooke, Québec, Canada	
Teaching assistant	2012
Class <i>Éléments de physiologie humaine (BIO-2909)</i>	

Université Laval, Quebec, Canada

Teaching assistant 2012

Class *Physiologie animale comparée II (BIO-2006)*

Université Laval, Quebec, Canada

Teaching assistant 2010-2011

Class *Mammalogie (BIO-2202)*

Université Laval, Quebec, Canada

Tutor 2004-2005

Natural sciences (mathematics and chemistry)

Collège de Bois-de-Boulogne, Quebec, Canada

STUDENT SUPERVISION

Ruijiao Sun, PhD, co-supervised with Stephanie Jenouvrier 2021-now

Joint program Massachusetts Institute of Technology – Woods Hole

Oceanographic Institution, Woods Hole, USA

Audrey Vallée, BSc (research initiation) 2019

Université de Sherbrooke, Sherbrooke, Canada

Marie-Pier Dubois-Gagnon, BSc (research initiation) 2015-2016

Université de Sherbrooke, Sherbrooke, Canada

Caroline Sauvé, BSc (research initiation) 2011-2012

Université Laval, Quebec, Canada

GRADUATE STUDENT COMMITTEES

Anne Ju Laberge, MSc. 2022-now

Université de Sherbrooke, Sherbrooke, Canada

MEMBERSHIPS

Animal Behavior Society 2022-now

Evolutionary and Demography Society 2022-now

Ecological Society of America 2022-now

WORK EXPERIENCE

Assistant 2015-2017

Designated institutional assistant to students writing graduate

scholarships applications (NSERC, FRQNT)

Université de Sherbrooke, Sherbrooke, Canada

2019

Biologist 2013-2014

Biologist in aquatic sciences (BI II)

Fisheries and Oceans Canada, Mont-Joli, Canada

Research assistant Laboratory of Pr. Ladd Johnson Université Laval, Quebec, Canada	2009
Research assistant Laboratory of Pr. Gwénaél Beauplet Université Laval, Quebec, Canada	2009
Research assistant Laboratory of Pr. Stéphane Boudreau Université Laval, Quebec, Canada	2008
Scientific educator Zoological Society of Graby, Granby, Canada	2007

COMMITTEES/REPRESENTATION/RESPONSIBILITIES

(Co-) Organizer Organisation of the symposium «204 - Les défis de gestion de la faune à l'ère de l'Anthropocène » ACFAS	2021
Organizer Organisation of the biweekly meetings of the Pelletier Lab Université de Sherbrooke	2019
Ambassador Research ambassador Sciences Faculty, Université de Sherbrooke	2019
Student representative Canadian Society for Ecology and Evolution Université de Sherbrooke	2018
Student representative Faculty ethical committee for animal welfare and protection Université de Sherbrooke	2016-2018
Consultant biologist Comité Régional pour la Protection des Falaises	2014-2015
Vice-president Projet Chlorophylle, Université Laval	2007-2009
Assistant vice-president/sociocultural Biology student association, Université Laval	2009

GRANTS

Co-PI on 3-year award WHOI-CU Boulder National Science Foundation	2023-2026
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	(1 385 464 USD)
Postdoctoral fellowship (awarded – will start in 2023)	2023-2025
National Science and Engineering Research Council of Canada	(90 000 CAD)
Postdoctoral fellowship	2020-2022
Fonds de Recherche du Québec – Nature et Technologies	(110 000 CAD)
Scholarship	2018
Caisse populaire Desjardins, Saint-Jérôme	(1 000 CAD)
Postgraduate scholarship – PhD	2017-2018
National Science and Engineering Research Council of Canada	(52 500 CAD)
Postgraduate scholarship – PhD	2015-2016
Fonds de Recherche du Québec – Nature et Technologies	(46 667 CAD)
Mobility grant	2016
EnviroNord (National Science and Engineering Research Council of Canada)	(2 000 CAD)
Excellence grant	2015
Ministère de l'Éducation et de l'Enseignement Supérieur du Québec	(4 000 CAD)
Postgraduate scholarship Alexander-Graham Bell, MSc	2011
National Science and Engineering Research Council of Canada	(17 500 CAD)
Postgraduate scholarship – MSc	2011
Fonds de Recherche du Québec – Nature et Technologies	(15 000 CAD; declined)
Scholarship – MSc	2010
Roche, <i>ltée.</i>	(3 000 CAD)
Research grant (undergraduate studies)	2008
National Science and Engineering Research Council of Canada	(4 000 CAD)

OTHER SCIENTIFIC COMMUNICATIONS

Public outreach

Van de Walle, J., B. Leblanc. 2020. La grande ourse et ses petits. Cartoon. (available online : <http://gensenblouseblanche.blogspot.com>)

Van de Walle, J. 2020. Les mâles accélèrent le vieillissement de leur mère. Journalistic novel. Université de Sherbrooke. (available online : <https://www.usherbrooke.ca/actualites/nouvelles/actualites/actualites-details/article/42344/>)

Van de Walle, J. 2020. Poissons connectés à l'échelle du globe : un tampon face à l'extinction. Journalistic novel. Université de Sherbrooke. (available online : <https://www.usherbrooke.ca/actualites/nouvelles/facultes/sciences/sciences-details/article/41962/>)

Van de Walle, J. 2019. Des oursons comme bouclier. Journalistic novel. Université de Sherbrooke. (available online: <https://www.usherbrooke.ca/actualites/nouvelles/actualites/actualites-details/article/40652/>)

Thesis

Van de Walle, J. 2020. Soins maternels chez l'ours brun (*Ursus arctos*) scandinave dans un contexte de chasse intensive. PhD thesis, Sherbrooke, Université de Sherbrooke, 250p.

Van de Walle, J. 2013. De la naissance au sevrage: influence des conditions environnementales et des caractéristiques individuelles chez le phoque commun (*Phoca vitulina*) du Saint-Laurent. MSc Thesis, Québec, Université Laval, 99p.

Guest conferences

Van de Walle, J. 2021. Maternal care in the Scandinavian brown bear (*Ursus arctos*) in a context of high hunting pressure. Biology department. Woods Hole Oceanographic Institution, July 2nd, Woods Hole, Massachusetts, USA.

Van de Walle, J. 2018. Bet-hedging and offspring mass variation in tree swallows - and how to promote collaboration between labs. Biology department. Norwegian University of Life Sciences, 7 May, Ås, Norway.

Presentations during conferences (only those as presenter shown)

Van de Walle, J. R. Sun, R. Fay, S. Patrick, J. Thorley, C. Barbraud, K. Delord, H. Weimerskirch, and S. Jenouvrier. 2022. Personality as a driver of population dynamics in a long-lived seabird. Ecological Society of America Meeting, August 14 – 19, Montreal, Canada.

Van de Walle, J. S. Patrick, C. Barbraud, K. Delord, H. Weimerskirch, and S. Jenouvrier. 2022. Unintentional demographic and evolutionary impacts of human activities in albatrosses. Workshop “The Evolutionary Consequences of Unintended Artificial Selection on Population Fitness”. Conférence Universitaire de Suisse Occidentale. August 22 – 25, Fafleralp, Switzerland.

Van de Walle, J., R. Fay, J.-M. Gaillard, F. Pelletier, S. Hamel, C. Barbraud, K. Delord, M. Gamelon, B. Larue, F. M. Mayer, J. A. Mills, E. Milot, J. Rotella, B.-E. Saether, C. Teplitsky, M. van de Pol, D. Van Vuren, C. Wells, J. Yarrall, S. Jenouvrier 2021. Individual life histories along the slow-fast continuum: challenging the ecological gambit. 46^e Congrès de la Société Québécoise pour l'Étude Biologique du Comportement. November. Sherbrooke, Canada (Virtual oral presentation).

Van de Walle, J., A. Zedrosser, J. E. Swenson, and F. Pelletier. 2021. Duration of maternal care: environmental context matters. Canadian Society for Ecology and Evolution (CSEE) Annual Meeting. August. Vancouver, Canada (Virtual oral presentation).

Van de Walle, J. F. Pelletier, A. Zedrosser, J. E. Swenson, S. Jenouvrier, and R. Bischof. 2021. Conséquences démographiques de la sélection induite par l'Homme : le cas de l'ours brun

scandinave. 88^e congrès annuel de l'Acfas. 3 November, Sherbrooke, Canada (Virtual oral presentation).

Van de Walle, J., F. Pelletier, A. Zedrosser, J. E. Swenson, and R. Bischof. 2020. The interplay between hunting selectivity and female reproductive strategies in shaping population dynamics. 45^e Congrès de la Société Québécoise pour l'Étude Biologique du Comportement, 11 November, Sherbrooke, Canada (Virtual oral presentation).

Van de Walle, J., F. Pelletier, A. Zedrosser, J. E. Swenson, and R. Bischof. 2020. The interplay between hunting selectivity and female reproductive strategies in shaping population dynamics. 7th Conference of the Evolutionary Demography Society, 8 October, Røros, Norway. (Virtual oral presentation).

Van de Walle, J., 2019. Maternal care in the context of high hunting pressure. Montreal Eco-Evo Symposium, 2 December, Montréal, Canada. (Oral presentation).

Van de Walle, J., A. Zedrosser, J. E. Swenson, and F. Pelletier. 2019. Inégalité dans le compromis entre mass et nombre de jeunes. 44^e Congrès de la Société Québécoise pour l'Étude Biologique du Comportement, 1-3 November, Montréal, Canada. (Oral presentation).

Van de Walle, J., M. Leclerc, S. M. J. G. Steyaert, A. Zedrosser, J. E. Swenson, and F. Pelletier. 2018. Spatial association with humans prolongs the duration of maternal care in brown bears. Congrès annuel de la Société Canadienne d'Écologie et d'Évolution, 18-21 July, Guelph, Canada. (Oral presentation).

Van de Walle, J., G. Pigeon, A. Zedrosser, J. E. Swenson, and F. Pelletier. 2018. Hunting regulation favors slow life histories in brown bears. Colloque annuel du Centre d'Études Nordiques. 15-16 February. Sherbrooke, Canada. (Oral presentation).

Van de Walle, J., G. Pigeon, A. Zedrosser, J. E. Swenson, and F. Pelletier. 2017. Ralentissement des histoires de vie en lien avec la réglementation de la chasse chez l'ours brun scandinave. Congrès annuel du Centre de la Science de la Biodiversité du Québec, 12-13 December, Montréal, Canada. (Oral presentation).

Van de Walle, J., G. Pigeon, A. Zedrosser, J. E. Swenson, and F. Pelletier. 2017. Hunting promotes slow life histories in brown bears. Congrès annuel de la Société Canadienne d'Écologie et d'Évolution, 7-10 May, Victoria, British-Columbia, Canada. (Oral presentation).

Van de Walle, J., M. Leclerc, S. M. J. G. Steyaert, A. Zedrosser, J. E. Swenson, and F. Pelletier. 2017. Spatial association with humans modulates the duration of maternal care in brown bears. 42^e Congrès de la Société Québécoise pour l'Étude Biologique du Comportement, 3-5 November, Ottawa, Canada. (Oral presentation).

Van de Walle, J., A. Zedrosser, J. E. Swenson, and F. Pelletier. 2017. Shift in maternal care tactic: contributions from intrinsic factors and artificial selection in the Scandinavian brown bear. 25th International Conference on Bear Research & Management, 12-17 November, Quito, Ecuador. (Oral presentation).

Van de Walle, J., G. Pigeon, J. E. Swenson, A. Zedrosser, and F. Pelletier. 2016. Tactiques de reproduction dans un contexte de chasse intensive: quelle est la meilleure option? 41^e conférence de la Société Québécoise pour l'Étude Biologique du Comportement. 4-6 November. Rimouski, Canada (Oral presentation).

- Van de Walle, J.,** A. Zedrosser, and F. Pelletier. 2016. When should maternal care terminate? The importance of offspring condition in the Scandinavian brown bear. 24th International Conference on Bear Research & Management. 12-16 June. Anchorage, Alaska, USA. (Poster).
- Van de Walle, J.,** M. O. Hammill, J. P. Y. Arnould, and G. Beauplet. 2013. Patrons et performances d'allaitement révélés par télémétrie thermique stomacale chez le phoque commun. 38^e conférence de la SQÉBC. 8-10 November. Montreal, Canada. (Oral presentation).
- Van de Walle, J.,** M. O. Hammill, J. P. Y. Arnould, and G. Beauplet. 2012. You can't hide it from me; I know you've been drinking! Detecting and estimating consumption in the harbour seal (*Phoca vitulina*) pups during lactation. 14th congress of the International Society for Behavioral Ecology. 12-18 August. Lund, Sweden (Poster).
- Van de Walle, J.,** M. O. Hammill, and G. Beauplet. 2012. Influence des facteurs extrinsèques et intrinsèques dans la saison de reproduction et de croissance du phoque commun (*Phoca vitulina*) dans l'estuaire du Saint-Laurent. 2^e Colloque du Département de Biologie de l'Université Laval. 1 February. Quebec, Canada. (Oral presentation).
- Van de Walle, J.,** M. O. Hammill, and G. Beauplet. 2011. Individual and environmental influence in mother-pup energetic transfer throughout lactation in a small phocid species, the harbour seal (*Phoca vitulina*) in the St. Lawrence estuary, Canada. 19th biennial conference on the biology of marine mammals. 27 November-2 December. Tampa Bay, Florida, USA. (Poster).
- Van de Walle, J.,** M. O. Hammill, and G. Beauplet. 2011. Période présevrage chez les chiots phoque commun (*Phoca vitulina*) dans l'estuaire du St-Laurent. (Poster).
1. 10^e AGA de Québec-Océan. 17-18 November. Québec, Canada.
 2. 36^e conférence de la Société Québécoise pour l'Étude Biologique du Comportement. 4-6 November. Sherbrooke, Canada.
- Van de Walle, J.,** M. O. Hammill, and G. Beauplet. Transfert d'énergie mère-petit pendant la lactation chez le phoque commun (*P. vitulina*) dans l'estuaire du St-Laurent: influence des facteurs intrinsèques et extrinsèques. (Poster).
1. 9^e AGA de Québec-Océan. 11-12 November 2010. Québec, Canada.
 2. 1^{er} Colloque du Département de Biologie de l'Université Laval, 2 February 2011, Québec, Canada.

MEDIA APPEARANCES (selection)

- LaTribune, « Les défis de gestion de la faune à l'ère de l'Anthropocène », 2021.
- Curium, « Jeune chercheuse étoile ».
- L'Actualité, "Les ourses s'approcheraient des humains pour protéger leurs petits", Canada, 2019.
- CBC, "Bears letting cubs stay home longer to avoid hunters", Canada, 2018.
- National Geographic, "Bears Are Caring for Their Cubs Longer in Response to Hunting", États-Unis, 2018.
- Cosmos Magazine, "Mama bears foil hunters by keeping babies close", Australie, 2018.

- Scientific American, “Hunting Rules Have Changed Mama Bear Care”, États-Unis, 2018.
- BBC Radio 4/Inside Science, “Genes and education, John Goodenough, Caring bears and hunting”, Royaume-Uni, 2018.

EXPERIENCE AS A REVIEWER

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| • PLOS One | 2022 |
| • Oikos | 2021 |
| • Hystrix | 2021 |
| • PLOS One | 2021 |
| • Climate Research | 2021 |
| • Wildlife Biology | 2020 |
| • Ecology Letters | 2020 |
| • Journal of Animal Ecology (revised manuscript) | 2020 |
| • Journal of Animal Ecology | 2020 |
| • Mammalian Biology (revised manuscript) | 2018 |
| • Mammalian Biology (revised manuscript) | 2018 |
| • Mammalian Biology | 2018 |
| • PLOSONE | 2018 |
| • PLOSONE | 2017 |
| • Behavioral Ecology and Sociobiology | 2016 |

PUBLIC OUTREACH ACTIVITIES

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| Albatrosses, their biology, and threats to their populations | 2022 |
| Congdon Elementary School, New Bedford, MA, USA | |

FIELDWORK PARTICIPATIONS

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| PhD student: Handling, sampling and tagging immobilized brown bears to measure their condition and habitat use. Research program directed by the Scandinavian Brown Bear Research Project, and F. Pelletier, Université de Sherbrooke. | May 2018 |
| PhD student: Description of habitat use and performing on-foot approaches on brown bears to monitor their reaction towards humans. Research program directed by the Scandinavian Brown Bear Research Project, and F. Pelletier, Université de Sherbrooke. | April-August 2015 |
| Biologist: Capture, sampling and tagging of harbour seals in the St. Lawrence Estuary. Research program directed by M. Hammill, Department of Fisheries and Oceans Canada | May-July 2014 |
| Biologist: Aerial surveys of belugas in the St. Lawrence Estuary to estimate population abundance. Research program directed by M. Hammill, Department of Fisheries and Oceans Canada | August 2014 |

- Biologist:** Capture, sampling and tagging of grey seals in the Gulf of St. Lawrence to analyse their demography and movements. Research program directed by M. Hammill, Department of Fisheries and Oceans Canada July 2014
- Biologist:** Boat surveys of whales in the St. Lawrence Estuary to estimate abundance of species. Research program directed by M. Hammill and V. Lesage, Department of Fisheries and Oceans Canada June-September 2014
- Biologist:** Boat surveys of whales in the St. Lawrence Estuary to estimate abundance of species. Research program directed by M. Hammill and V. Lesage, Department of Fisheries and Oceans Canada June-September 2013
- Biologist:** Capture, sampling and tagging of harbour seals in the St. Lawrence Estuary. Research program directed by M. Hammill, Department of Fisheries and Oceans Canada and G. Beauplet, Université Laval May-August 2013
- Biologist:** Capture, sampling and tagging of grey seals in the Gulf of St. Lawrence to analyse their demography and movements. Research program directed by M. Hammill, Department of Fisheries and Oceans Canada July 2013
- Biologist:** Capture and sampling of grey seals in the Gulf of St. Lawrence to analyse their diets. Research program directed by M. Hammill, Department of Fisheries and Oceans Canada September 2011
- MSc student:** Capture-Mark-Recapture program on harbour seals, St. Lawrence Estuary. Research program directed by G. Beauplet, Université Laval May-July 2012
- MSc student:** Capture-Mark-Recapture program on harbour seals, St. Lawrence Estuary. Research program directed by G. Beauplet, Université Laval May-July 2011
- MSc student:** Capture-Mark-Recapture program on harbour seals, St. Lawrence Estuary. Research program directed by G. Beauplet, Université Laval May-July 2010
- Research assistant:** Capture-Mark-Recapture program on harbour seals, St. Lawrence Estuary. Research program directed by G. Beauplet, Université Laval May-July 2009
- Research assistant:** Collection of stamping scars from caribous on spruce roots to evaluate their migratory paths. Northern Québec. Research program directed by S. Boudreau, Université Laval. July 2008

References:

1) Dr. Stephanie Jenouvrier
 Woods Hole Oceanographic Institution
 Email: sjenouvrier@whoi.edu

Telephone: 508 289 3245

2) Pr. Fanie Pelletier

Université de Sherbrooke

Email: Fanie.Pelletier@USherbrooke.ca

Telephone: 819 821-8000, poste 61092