

November 2014

JAMES W.A. GRANT

Background

Citizenship: Canadian
Personal Status: Married, two children
Current Position: Professor

Correspondence: Department of Biology
Concordia University
7141 Sherbrooke Street West
Montréal, Québec
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Education

1987-89	Postdoctoral Fellow - NSERC	McGill University, Montreal, Qc Supervisor: Donald L. Kramer
1987	PhD, Zoology	University of Guelph, Guelph, Ontario Supervisor: David L.G. Noakes
1980	MSc, Biology	Queen's University, Kingston, Ontario Supervisor: Patrick W. Colgan
1977	BSc, Zoology	University of Western Ontario, London, Ontario Supervisor: Miles H.A. Keenleyside

Professional and Academic Experience

2006-present	Professor, Department of Biology, Concordia University
2011-2012	Acting, Co-Principal, Loyola International College, Concordia University
2006-2009	Chair, Department of Biology, Concordia University
1995-2006	Associate Professor, Department of Biology, Concordia University
1989-1995	Assistant Professor, Department of Biology, Concordia University
1987-1989	NSERC Postdoctoral Fellow, Department of Biology, McGill University
1983-1987	PhD Student, Department of Zoology, University of Guelph
1982-1983	Ecologist-Research, Environmental Services Department, Newfoundland

	& Labrador Hydro, St. John's, Newfoundland
1981-1982	Biologist, MacLaren Plansearch Limited, St. John's, Newfoundland
1979-1980	Biologist, Nanticoke Fish Study and the Glenora Fisheries Station, Ontario Ministry of Natural Resources
1977-1980	MSc Student, Department of Biology, Queen's University
1973-1977	BSc Student, Department of Zoology, University of Western Ontario

Research

External Research Grants

2011-2016	NSERC Discovery Grant	\$32,000/year
2005-2010	NSERC Discovery Grant	\$38,000/year
2003-2004	AquaNet Research Grant	\$10,000
2002-2005	FCAR Team Grant (with L.-A. Giraldeau [P.I.] & L. Lefebvre)	\$42,706/year
1998-2004	NSERC Discovery Grant	\$31,185/year
1996-1999	FCAR Team Grant (with L.-A. Giraldeau [P.I.] & L. Lefebvre)	\$29,412/year
1994-1998	NSERC Research Grant	\$27,000/year
1993-1994	NSERC Research Grant	\$27,000
1992-1993	NSERC Operating Grant	\$22,000
1990-1992	FCAR Team Grant (with P. Magnan [P.I.] & W. Vickery)	\$30,000/year
1990-1992	FCAR Operating Grant for New Researchers	\$14,000/year
1990	FCAR Equipment Grant	\$4,338
1989-1991	NSERC Operating Grant	\$24,000/year

Internal Research Grants

2006-09	Chair's Research Grant – Concordia	\$20,000/year
2002	General Research Fund – Concordia	\$1,820.45
1994-97	Faculty Research Development Fund	\$9,077/year
1994	General Research Fund - Concordia	\$4,200

Refereed Publications

97. Dolinsek, I.J., R.L. McLaughlin, J.W.A. Grant, L.M. O'Connor, and T.C. Pratt. 2014. Do natural history data predict the movement ecology of fishes in Lake Ontario streams? *Canadian Journal of Fisheries and Aquatic Sciences* 71: 1171-1185.
96. Lindeman, A.A., J.W.A. Grant, and C.M. Desjardins. 2014. Density-dependent territory size and individual growth rate in juvenile Atlantic salmon (*Salmo salar*). *Ecology of Freshwater Fish*, in press.
95. Gray, Q.Z., D.J. Fraser, and J.W.A. Grant. 2014. Extirpation for conservation: applying predictors of extinction risk to eradicate introduced trout populations for lake restoration. *Ecological Restoration* 32: 59-67.

94. Roy, M.L., A.G. Roy, J.W.A. Grant, and N.E. Bergeron. 2013. Individual variability of wild juvenile Atlantic salmon activity patterns: effect of flow stage, temperature and habitat use. *Canadian Journal of Fisheries and Aquatic Sciences* 70: 1082-1091.
93. Toobaie, A., J.-W. Kim, I.J. Dolinsek, and J.W.A. Grant. 2013. Diel activity patterns of the fish community in a temperate stream. *Journal of Fish Biology* 82: 1700-1707.
92. Roy, M.L., A.G. Roy, J.W.A. Grant, and N.E. Bergeron. 2013. Individual variability in the movement behaviour of juvenile Atlantic salmon. *Canadian Journal of Fisheries and Aquatic Sciences* 70: 339-347.
91. Toobaie, A. and J.W.A. Grant. 2013. Effect of food abundance on aggressiveness and territory size of juvenile rainbow trout, *Oncorhynchus mykiss*. *Animal Behaviour* 85: 241-246.
90. Lindeman, A.A. and J.W.A. Grant. 2012. Effects of simultaneous versus sequential settlement on the territorial behaviour of juvenile rainbow trout (*Oncorhynchus mykiss*). *Ethology* 118: 835-840.
89. Wood, J.L.A., J.W.A. Grant, and M.H. Belanger. 2012. Population density and territory size in juvenile rainbow trout, *Oncorhynchus mykiss*: implications for population regulation. *Canadian Journal of Fisheries and Aquatic Sciences* 69: 1121-1128.
88. Noonan, M.J., J.W.A. Grant, and C.D. Jackson. 2012. A quantitative assessment of fish passage efficiency. *Fish and Fisheries* 13: 450-464.
87. Steingrímsson, S.Ó. and J.W.A. Grant. 2011. Shape of single and multiple central-place territories in a stream-dwelling fish. *Ethology* 117: 1170-1177.
86. Lee, G., J.W.A. Grant, and P. Comolli. 2011. Dominant convict cichlids (*Amatitlania nigrofasciata*) grow faster than subordinates when fed an equal ration. *Behaviour* 148: 877-887.
85. Kim, J.-W., J.W.A. Grant, and G.E. Brown. 2011. Do juvenile Atlantic salmon (*Salmo salar*) use chemosensory cues to detect and avoid risky habitats in the wild? *Canadian Journal of Fisheries and Aquatic Science* 68: 655-662.
84. Weir, L.K., J.W.A. Grant, and J.A. Hutchings. 2011. The influence of operational sex ratio on the intensity of competition for mates. *The American Naturalist* 177: 167-176.
83. Kim, J.-W., J.L.A. Wood, J.W.A. Grant, and G.E. Brown. 2011. Acute and chronic increases in predation risk affect the territorial behaviour of juvenile Atlantic salmon in the wild. *Animal Behaviour* 81: 93-99.
82. Steingrímsson, S.Ó. and J.W.A. Grant. 2011. Determinants of multiple central-place territory use in wild young-of-the-year Atlantic salmon (*Salmo salar*). *Behavioral Ecology and Sociobiology* 65: 275-286.
81. Nislow, K.H., J.D. Armstrong, and J.W.A. Grant. 2011. The role of competition in the ecology of juvenile Atlantic salmon. In: O. Aas, S. Einum, A. Klemetsen, and J. Skurdal (eds). *Atlantic salmon ecology*. pp. 171-197. Blackwell Publishing Limited.
80. Clark, L. and J.W.A. Grant. 2010. Intrasexual competition and courtship in female and male Japanese medaka (*Oryzias latipes*): effects of operational sex ratio and density. *Animal Behaviour* 80: 707-712.
79. Krause, R.J., J.W.A. Grant, J.D. McLaughlin, and D.J. Marcogliese. 2010. Do infections with parasites and exposure to pollution affect susceptibility to predation in *Etheostoma nigrum* (Percidae: Etheostomatinae)? *Canadian Journal of Zoology* 88: 1218-1225.

78. Weir, L.K. and J.W.A. Grant. 2010. Courtship rates signal fertility in an externally fertilizing fish. *Biology Letters* 6: 727-731.
77. Whiteway, S.L., P.M. Biron, A. Zimmerman, O. Venter, and J.W.A. Grant. 2010. Do instream restoration structures enhance salmonids abundance? A meta-analysis. *Canadian Journal of Fisheries and Aquatic Science* 67: 831-841.
76. Weir, L.K., J.W.A. Grant and J.A. Hutchings. 2010. Patterns of aggression and operational sex ratio within alternative male phenotypes in Atlantic salmon. *Ethology* 116: 166-175.
75. Imre, I., J.W.A. Grant and R.A. Cunjak. 2010. Density-dependent growth of young-of-the-year Atlantic salmon (*Salmo salar*) revisited. *Ecology of Freshwater Fish* 19: 1-6.
74. Kim, J.-W., G. E. Brown, I. J. Dolinsek, N. N. Brodeur, A. O. H. C. Leduc, and J. W. A. Grant. 2009. Combined effects of chemical and visual information in eliciting antipredator behaviour in juvenile Atlantic salmon *Salmo salar* L. *Journal of Fish Biology* 74: 1280-1290.
73. Brodeur, N.N., M.V. Noël, O. Venter, L. Bernatchez, S. Dayanandan and J.W.A. Grant. 2008. No evidence of kin bias in dispersion of young-of-the-year Atlantic salmon (*Salmo salar* L.) in a natural stream. *Journal of Fish Biology* 73: 2361-2370.
72. Venter, O., J.W.A. Grant, M.V. Noel and J-W. Kim. 2008. Mechanisms underlying the increase in young-of-the-year Atlantic salmon (*Salmo salar*) density with habitat complexity. *Canadian Journal of Fisheries and Aquatic Sciences* 65: 1956-1964..
71. Steingrímsson, S.O. and J.W.A. Grant. 2008. Multiple central-place territories in wild young of-the-year Atlantic salmon *Salmo salar*. *Journal of Animal Ecology* 77: 448-457.
70. Dolinsek, I.J., P.M. Biron, and J.W.A. Grant. 2007. Assessing the effect of visual isolation on the population density of Atlantic salmon (*Salmo salar*) using GIS. *River Research and Applications* 23: 763-774.
69. Breau, C., L.K. Weir, and J.W.A. Grant. 2007. Individual variability in activity patterns of juvenile Atlantic salmon (*Salmo salar*) in Catamaran Brook, New Brunswick. *Canadian Journal of Fisheries and Aquatic Sciences* 64: 486-494.
68. Kim, J.-W. and J.W.A. Grant. 2007. Effects of patch shape and group size on the effectiveness of defence by juvenile convict cichlids. *Animal Behaviour* 73: 275-280.
67. Dolinsek, I.J., J.W.A. Grant and P.M. Biron. 2007. The effect of habitat heterogeneity on the population density of juvenile Atlantic salmon (*Salmo salar* L.). *Journal of Fish Biology* 70: 206-214.
66. Venter, O., N.N. Brodeur, L. Nemiroff, B. Belland, I.J. Dolinsek and J.W.A. Grant. 2006. Threats to endangered species in Canada. *BioScience* 56: 903-910.
65. Johnson, C.A., L.-A. Giraldeau and J.W.A. Grant. 2006. Intensity of interference affects the distribution of house sparrows, *Passer domesticus*, at food patches. *Animal Behaviour* 71: 965-970.
64. Weir, L.K. and J.W.A. Grant. 2005. Effects of aquaculture on wild fish populations: a synthesis of data. *Environmental Reviews* 13: 145-168.
63. Grant, J.W.A. and I. Imre. 2005. Patterns of density-dependent growth in juvenile stream-dwelling salmonids. *Journal of Fish Biology* 67 (Supplement B): 100-110.
62. Imre, I., J.W.A. Grant, and R.A. Cunjak. 2005. Density-dependent growth of young-of-the-year Atlantic salmon (*Salmo salar*) in Catamaran Brook, New Brunswick. *Journal of Animal Ecology* 74: 508-516.

61. Noël, M.V., J.W.A. Grant, and J.G. Carrigan. 2005. Effects of the spatial clumping of food, measured by competitor-to-resource ratio, on aggression and size variation within groups of convict cichlids. *Animal Behaviour* 69: 1157-1163.
60. Girard, I., J.W.A. Grant, and S.Ó. Steingrímsson. 2004. Foraging, growth, and loss rate of young-of-the-year Atlantic salmon (*Salmo salar*) in relation to habitat use in Catamaran Brook, New Brunswick. *Canadian Journal of Fisheries and Aquatic Sciences* 61: 2339-2349.
59. Dubois, F., L.-A. Giraldeau, I.M. Hamilton, J.W.A. Grant, and L. Lefebvre. 2004. Distraction sneakers decrease the expected level of aggression within groups: a game-theoretic model. *The American Naturalist* 164: E32-E45.
58. Kim, J.-W., G.E. Brown, and J.W.A. Grant. 2004. Interactions between patch size and predation risk affect competitive aggression and size variation in juvenile convict cichlids. *Animal Behaviour* 68: 1181-1187.
57. Weir, L.K. and J.W.A. Grant. 2004. The causes of resource monopolization: interaction between resource dispersion and mode of competition. *Ethology* 110: 63-74.
56. Imre, I., J.W.A. Grant, and E.R. Keeley. 2004. The effect of food abundance on territory size and population density of juvenile steelhead trout (*Oncorhynchus mykiss*). *Oecologia* 138: 371-378.
55. Johnson, C.A., J.W.A. Grant, and L.-A. Giraldeau. 2004. The effect of patch size and competitor number on aggression among foraging house sparrow. *Behavioral Ecology* 15: 412-418.
54. Steingrímsson, S.Ó. and J.W.A. Grant. 2003. Patterns and correlates of movement and site fidelity in individually tagged young-of-the-year Atlantic salmon (*Salmo salar*). *Canadian Journal of Fisheries and Aquatic Sciences* 60: 193-202.
53. Dubois, F., L.-A. Giraldeau and J.W.A. Grant. 2003. Resource defense in a group foraging context. *Behavioral Ecology* 14: 2-9.
52. Grant, J.W.A. and P.E. Foam. 2002. Effect of operational sex ratio on female-female versus male-male competitive aggression. *Canadian Journal of Zoology* 80: 2242-2246.
51. Imre, I., J.W.A. Grant and E.R. Keeley. 2002. The effect of visual isolation on territory size and population density of juvenile rainbow trout (*Oncorhynchus mykiss*). *Canadian Journal of Fisheries and Aquatic Sciences* 59: 303-309.
50. Breau, C. and J.W.A. Grant. 2002. Manipulating territory size via vegetation structure: optimal size of area guarded by the convict cichlid (Pisces, Cichlidae)? *Canadian Journal of Zoology* 80: 376-380.
49. Grant, J.W.A., I.L. Girard, C. Breau and L.K. Weir. 2002. Influence of food abundance on competitive aggression in juvenile convict cichlids. *Animal Behaviour* 63: 323-330.
48. Johnson, C.A., L.-A. Giraldeau and J.W.A. Grant. 2001. The influence of handling time on interference among house sparrows foraging at different seed densities. *Behaviour* 138: 597-614.
47. Keeley, E.R. and J.W.A. Grant. 2001. Prey size of salmonid fishes in streams, lakes and oceans. *Canadian Journal of Fisheries and Aquatic Sciences* 58: 1122-1132.
46. McLaughlin, R.L. and J.W.A. Grant. 2001. Field examination of perceptual and energetic bases for intermittent locomotion by recently-emerged brook charr in still-water pools. *Behaviour* 138: 559-574.

45. Goldberg, J.L., J.W.A. Grant and L. Lefebvre. 2001. Effects of the temporal predictability and spatial clumping of food on competitive aggression in the Zenaida dove. *Behavioral Ecology* 12: 490-495.
44. Grant, J.W.A., C.L. Gaboury, and H.L. Levitt. 2000. Competitor-to-resource ratio, a general formulation of operational sex ratio, as a predictor of competitive aggression in Japanese medaka (Pisces: Oryziidae). *Behavioral Ecology* 11: 670-675.
43. McLaughlin, R.L., J.W.A. Grant, D.L.G. Noakes. 2000. Living with failure: the prey capture success of young brook charr in streams. *Ecology of Freshwater Fish* 9: 81-89.
42. Prawn, J.C. and J.W.A. Grant. 1999. Optimal territory size in the convict cichlid. *Behaviour* 136: 1347-1363.
41. Steingrímsson, S.Ó. and J.W.A. Grant. 1999. Allometry of territory size and metabolic rate as predictors of self-thinning in young-of-the-year Atlantic salmon. *Journal of Animal Ecology* 68: 17-26.
40. Armstrong, J.D., J.W.A. Grant, H.L. Forsgren, K.D. Fausch, R.M. DeGraaf, I.A. Fleming, T.D. Prowse, and I.J. Schlosser. 1998. The application of science to the management of Atlantic salmon: integration across scales. *Canadian Journal of Fisheries and Aquatic Sciences* 55 (Suppl. 1): 303-311.
39. Grant, J.W.A., S.Ó. Steingrímsson, E.R. Keeley and R.A. Cunjak. 1998. Implications of territory size for the measurement and prediction of salmonid abundance in streams. *Canadian Journal of Fisheries and Aquatic Sciences* 55 (Suppl. 1): 181-190.
38. Basquill, S.P. and J.W.A. Grant. 1998. An increase in habitat complexity reduces aggression and monopolization of food by zebrafish, *Danio rerio*. *Canadian Journal of Zoology* 76: 770-772.
37. Robb, S.E. and J.W.A. Grant. 1998. Spatial and temporal clumping of food affect the intensity of aggression in Japanese medaka. *Animal Behaviour* 56: 29-34.
36. Blanckenhorn, W.U., J.W.A. Grant and D.J. Fairbairn. 1998. Monopolization in a resource queue: water striders competing for food and mates. *Behavioral Ecology and Sociobiology* 42: 63-70.
35. Keeley, E.R. and J.W.A. Grant. 1997. Allometry of diet selectivity in juvenile Atlantic salmon (*Salmo salar*). *Canadian Journal of Fisheries and Aquatic Sciences* 54:1894-1902.
34. Grant, J.W.A. Territoriality. 1997. In: J-G.J. Godin (ed). *Behavioral ecology of teleost fishes*, pp. 81-103. Oxford University Press.
33. Ruzzante, D.E., D.C. Hamilton, D.L. Kramer and J.W.A. Grant. 1996. Scaling of the variance and the quantification of resource monopolization. *Behavioral Ecology* 7:199-207.
32. Grant, J.W.A. and L.D. Green. 1996. Mate copying versus preference for actively courting males by female Japanese medaka (*Oryzias latipes*). *Behavioral Ecology* 7:165-167.
31. Grant, J.W.A., P.C. Casey, M.J. Bryant and A. Shahsavarani. 1995. Mate choice by male Japanese medaka (Pisces, Oryziidae). *Animal Behaviour* 50:1425-1428.
30. Bryant, M.J. and J.W.A. Grant. 1995. Defence, monopolization of food and the variation in fitness in groups of Japanese medaka depend on the synchrony of food arrival. *Animal Behaviour* 49:1469-1479.
29. Keeley, E.R. and J.W.A. Grant. 1995. Allometric and environmental correlates of territory size in juvenile Atlantic salmon (*Salmo salar*). *Canadian Journal of Fisheries and Aquatic*

- Sciences 52:186-196.
28. Grant, J.W.A., M.J. Bryant and C.E. Soos. 1995. Synchrony of female arrival, mediated by synchrony of female arrival, alters the variance of male mating success in the Japanese medaka. *Animal Behaviour* 49:367-375.
 27. McLaughlin, R.L. and J.W.A. Grant. 1994. Morphological and behavioural differences among recently-emerged brook charr, *Salvelinus fontinalis*, foraging in slow- vs. fast-running water. *Environmental Biology of Fishes* 39:289-300.
 26. Grand, T.C. and J.W.A. Grant. 1994. Spatial predictability of food and the ideal free distribution in convict cichlids, *Cichlasoma nigrofasciatum*. *Animal Behaviour* 48:909-919.
 25. McLaughlin, R.L., J.W.A. Grant and D.L. Kramer. 1994. Foraging movements in relation to morphology, water-column use, and diet for recently-emerged brook trout (*Salvelinus fontinalis*) in still-water pools. *Canadian Journal of Fisheries and Aquatic Sciences* 51:268-279.
 24. Grand, T.C. and J.W.A. Grant. 1994. Spatial predictability of food influences its monopolization and defence by juvenile convict cichlids. *Animal Behaviour* 47:91-100.
 23. Keeley, E.R. and J.W.A. Grant. 1993. Visual information, resource value and sequential assessment in convict cichlid contests. *Behavioral Ecology* 4:345-349.
 22. Grant, J.W.A. and R.T. Guha. 1993. Spatial clumping of food increases its monopolization and defense by convict cichlids. *Behavioral Ecology* 4:293-296.
 21. Keeley, E.R. and J.W.A. Grant. 1993. Asymmetries in the expected value of food do not predict the outcome of contests between convict cichlids. *Animal Behaviour* 45:1035-1037.
 20. Grant, J.W.A. 1993. Self-thinning in stream-dwelling salmonids. In: R.J. Gibson and R.E. Cutting (eds). The production of juvenile Atlantic salmon, *Salmo salar*, in natural waters. *Canadian Special Publication of Fisheries and Aquatic Sciences* 118:99-102.
 19. Koops, M.A. and J.W.A. Grant. 1993. Weight asymmetry and sequential assessment in convict cichlid contests. *Canadian Journal of Zoology* 71:475-479.
 18. Grant, J.W.A. 1993. Whether or not to defend? The influence of resource distribution. *Marine Behaviour and Physiology* 23:137-153.
 17. Grant, J.W.A., C.A. Chapman and K.S. Richardson. 1992. Defended versus undefended home range size of carnivores, ungulates and primates. *Behavioral Ecology and Sociobiology* 31:149-161.
 16. McLaughlin, R.L., J.W.A. Grant and D.L. Kramer. 1992. Individual variation and alternative patterns of foraging movements in recently-emerged brook charr (*Salvelinus fontinalis*). *Behaviour* 120:286-301.
 15. Grant, J.W.A. and D.L. Kramer. 1992. Temporal clumping of food arrival reduces its monopolization and defence by zebrafish, *Brachydanio rerio*. *Animal Behaviour* 44:101-110.
 14. Grant, J.W.A. and D.L. Kramer. 1990. Territory size as a predictor of the maximum density of juvenile salmonids in streams. *Canadian Journal of Fisheries and Aquatic Sciences* 47:1724-1737.
 13. Grant, J.W.A. 1990. Aggressiveness and the foraging behaviour of young-of-the-year brook charr (*Salvelinus fontinalis*). *Canadian Journal of Fisheries and Aquatic Sciences* 47:915-

920.

12. Grant, J.W.A., D.L.G. Noakes and K.M. Jonas. 1989. Spatial distribution of defence and foraging in young-of-the-year brook charr, *Salvelinus fontinalis*. *Journal of Animal Ecology* 58:773-784.
11. Grant, J.W.A. and D.L.G. Noakes. 1988. Aggressiveness and foraging mode of young-of-the-year brook charr. *Behavioral Ecology and Sociobiology* 22:435-445.
10. Grant, J.W.A. and D.L.G. Noakes. 1987. Movers and stayers: foraging tactics of young-of-the-year brook charr. *Journal of Animal Ecology* 56:1001-1013.
9. Grant, J.W.A. and D.L.G. Noakes. 1987. Economics of escape behaviour and use of cover by young-of-the-year brook trout. *Canadian Journal of Fisheries and Aquatic Sciences* 44:1390-1396.
8. Grant, J.W.A. and D.L.G. Noakes. 1987. A simple model of optimal territory size for drift-feeding fishes. *Canadian Journal of Zoology* 65:270-276.
7. Grant, J.W.A. and D.L.G. Noakes. 1986. A test of a size-selective predation model with juvenile brook charr. *Journal of Fish Biology* 29 (Supplement A):15-24.
6. Noakes, D.L.G. and J.W.A. Grant. 1986. Behavioural ecology and production of riverine fishes. *Polskie Archiwum Hydrobiologii* 33:249-262.
5. Grant, J.W.A., J. Englert and B.F. Bietz. 1986. Application of a method for assessing the impact of watershed practices: effects of logging on salmonid standing crop. *North American Journal of Fisheries Management* 6:24-31.
4. Barnes, J.A., D.E. Peters and J.W.A. Grant. 1985. Evaluation of a velocity-related fish passage problem downstream of the Upper Salmon Hydroelectric development, Newfoundland. *Canadian Water Resources Journal* 10:1-12.
3. Grant, J.W.A. and P.W. Colgan. 1984. Territorial behaviour of the male johnny darter, *Etheostoma nigrum*. *Environmental Biology of Fishes* 10:261-269.
2. Grant, J.W.A. and P.W. Colgan. 1983. Reproductive success and mate choice in the johnny darter, *Etheostoma nigrum*. *Canadian Journal of Zoology* 61:437-446.
1. Colgan, P.W., W.A. Nowell, M.R. Gross and J.W.A. Grant. 1979. Aggressive habituation and rim circling in the social organization of bluegill sunfish, *Lepomis macrochirus*. *Environmental Biology of Fishes* 4:29-36.

Non-refereed Contributions

- Noakes, D.L.G. and J.W.A. Grant. 1992. Feeding and social behaviour of brook and lake charr. In: F.A. Huntingford and J.H. Thorpe (eds). *The importance of feeding behaviour for the efficient culture of salmonid fishes*, pages 13-20. World Aquaculture Society, Baton Rouge.
- Bietz, B.F., J.W.A. Grant and P. McKee. 1988. Stock-habitat relationships for selected freshwater fish. *Canadian Electrical Association Report No. 604 G 560*, 137 pages.
- Grant, J.W.A. 1988. Book review: A.C. Kamil, J.R. Krebs and H.R. Pulliam (eds). 1987. *Foraging behavior*. Plenum Press, New York. *Experimental Biology* 47:226.
- Grant, J.W.A. and D.J. Kiell. 1983. An application of the instream flow incremental methodology in Newfoundland. *Transactions of the Canadian Electrical Association*. 22 pages.

Invited Seminars

2014. Invited speaker at the 17^{ème} Colloque Annuel du CIRSA, Centre interuniversitaire de recherche sur le saumon atlantique, 6-7 May, Université Laval.
2011. Département des sciences biologiques, Université du Québec à Montréal.
2010. Department of Biological Sciences, University of Manitoba.
2010. Department of Zoology, University of Gothenburg, Sweden.
2009. Department of Biology, Carleton University.
2009. Département de géographie, Université de Montréal.
2008. Département de biologie, Université de Sherbrooke.
2006. Department of Biology, University of New Brunswick.
2006. Invited speaker at a symposium entitled “From individual to population processes in fish”, Seventh International Congress on the Biology of Fish, 18-22 July, St. John’s, Newfoundland.
2006. Department of Zoology, University of Toronto, 9 January.
2005. Keynote speaker at the Fisheries Society of the British Isles Annual Symposium on “Fish Habitat Ecology and Conservation”, University of Bangor, U.K.
2004. Invited speaker at a symposium entitled “The status of Atlantic salmon: populations and habitats. 133rd Annual Meeting of the American Fisheries Society, Québec City.
2004. Department of Biology, Concordia University.
2004. Département des sciences biologiques, Université du Québec à Montréal.
2003. Department of Biology, Dalhousie University, Halifax, Nova Scotia.
1999. Department of Biology, Dartmouth College, Hanover, New Hampshire.
1998. Département des sciences biologiques, Université de Montréal.
1998. Invited speaker at Foraging/98, an international conference on foraging behavior, 21-24 July, Santa Cruz, California.
1997. Invited speaker at an international workshop *Integrating across scales: predicting patterns of change in Atlantic salmon*, March 17-20, Braemar, Scotland.
1995. Department of Biology, McGill University.
1994. Invited speaker to a symposium Mating systems, parental care and reproductive success, Ecological and Evolutionary Ethology of Fishes, May 15-18, Victoria, Canada.
1994. Department of Biology, University of Northern British Columbia, Prince George.
1994. Animal Behaviour Group, University of California at Davis.
1994. Department of Biology, Concordia University.
1994. Department of Zoology, University of Manitoba, Winnipeg.
1993. Department of Zoology, Laval University, Quebec City.
1992. Department of Fisheries and Oceans, Moncton.
1992. Department of Zoology, University of Western Ontario, London.
1991. Invited speaker at an International Workshop on the Behavioural Ecology of Fishes, Erice, Sicily.
1990. Invited speaker to a Symposium on Ecology of Fluvial Fishes in Natural Habitats, International Congress of Ecology, Yokohama, Japan. (with D.L.G. Noakes)
1990. Department of Biology, University of Calgary.

1988. Department of Biology, Université du Québec à Trois-Rivières.
1988. Department of Biology, Queen's University.
1987. Pacific Biological Station, Nanaimo, British Columbia.
1987. Department of Biology. Université de Montréal.
1987. Ecology Group, Queen's University, Kingston.

Teaching

Undergraduate Courses

Biology of Fishes (BIOL 431): 1989-1996
Fundamentals of Ecology (BIOL 230): 1992-1995
Biodiversity and Ecology (BIOL 226): 1995-present
Applied Ecology and Conservation Biology (BIOL 457): 1997-2010
Aquatic Ecology (BIOL 459): 2001-present
Introduction to Sustainability (BIOL 298C/205): 2011-present
Internship in Sustainability (LOYC 398C): 2011-2013

Graduate Courses

Seminar Course in Behavioural Ecology (BIOL 601/2)
Research Topics in Salmonid Ecology
Seminar Course in Conservation Biology

Honours Research Projects

1. Keeley, E.R. 1991. Resource value asymmetries and sequential assessment in convict cichlid contests. Now an Associate Professor, Department of Biological Sciences, Idaho State University, Pocatello.
2. Koops, M.A. 1991. Weight asymmetry and sequential assessment in convict cichlid contests. Now a Research Scientist at the Canada Centre for Inland Waters, Burlington, Ontario.
3. Guha, R.T. 1992. Spatial clumping of food increases its monopolization and defense by convict cichlids. Now a physiotherapist.
4. Casey, P. 1993. Is sperm limiting and are males choosy? Tests with the Japanese medaka (*Oryzias latipes*). Now working in the aquaculture industry.
5. Green, L. 1994. Mate copying in the Japanese medaka. Now a Physician in Toronto.
6. Harris, L. 1995. Self-thinning in juvenile Atlantic salmon. Now a biologist with the Department of Fisheries and Oceans, Halifax.
7. Praw, J. 1995. Operational sex ratio and male mate choice in Japanese medaka. Now a Research Officer with CBC, Toronto.
8. Gaboury, C. 1996. Competitor-to-resource ratio and the nature of competition for food and mates in the Japanese medaka. Now an executive in the pharmaceutical industry in Montréal.
9. Dobrin, A. 1997. Does morphology predict mobility in fishes? Now an aquarist at the Seattle

- Aquarium.
10. Levitt, H. 1998. Competitor-to-resource ratio (CRR) as a predictor of aggression in the Japanese medaka. Now a Physician in New York City.
 11. Girard, I. 1998. The influence of food abundance on competitive aggression in convict cichlids. Now a biologist with the Alberta government.
 12. Haber, Paul. 1999. The extirpation of mammals in Canadian parks. Now an assistant producer at the Discovery Channel, Toronto.
 13. Wallace, Mark. 1999. Effect of spatial clumping on aggression, growth, and growth depensation in convict cichlids, *Cichlasoma nigrofasciatum*. Now a systems analyst in Montréal.
 14. Semeniuk, Christina. 1999. The diet of the spiny dogfish (*Squalus acanthias*) in the southern Gulf of St. Lawrence and on the Nova Scotia Shelf from 1997-1998. Now a PhD student at Simon Fraser University.
 15. Hunter, Karen. 1999. Overexploitation of marine fisheries: fish biology or human behaviour? MSc, Trent University. Now a biologist in New Jersey.
 16. Bartholomew, Julie. 2000. Why are species susceptible to extinction? A Canadian perspective. Now a sales representative for Johnson and Johnson.
 17. Breau, Cindy. 2000. Optimal guarded area in the convict cichlid (*Cichlasoma nigrofasciatum*)? Now a Biologist, DFO, Moncton.
 18. Trindade, Mariana. 2000. Threats to endangered wildlife in Canada. Now a PhD student, Memorial University of Newfoundland. .
 19. Weir, L.K. 2001. Resource monopolization: effects of resource distribution and mode of competition. Now a Postdoc at UBC.
 20. Powell, Daniele. 2001. The influence of competitor density and patch size on avian aggression and the incidence of patch monopolization. Unknown.
 21. Soutouguina, Marianna. 2001. Historical changes in distribution and population size in mammalian species of Canada. Unknown.
 22. Foam, P.E. 2001. The effect of operational sex ratio on the competition for mates by both male and female Japanese medaka (*Oryzias latipes*). Now a Biology Professor at John Abbott College (CEGEP).
 23. Noel, M. 2003. Now an MSc student, James Cook University, Australia.
 24. Bissada, C. 2004. Time budget and allometry of home range size of harlequin bass (*Serranus tigrinus*) on the fringing reefs of Barbados. Now an MSc student, Barbados.
 25. Comolli, P. 2004. Social stress as a cause of growth depensation in juvenile convict cichlids (*Archocentrus nigrofasciatus*). Now a fisheries observer in Alaska.
 26. Henault-Ethier, L. 2005. Do male convict cichlids compete for females, nest sites or both? Now a PhD student at UQAM.
 27. Venter, O. 2005. Atlantic salmon density increases with habitat complexity: the joint effects of a reduction in territory size and perceived predation risk. Now a PhD candidate in Australia.
 28. Clark, L. 2006. Effects of operational sex ratio on the intra-sexual aggression and courtship behaviour of female and male convict cichlids (*Archocentrus nigrofasciatus*). Now an MSc candidate in my laboratory.
 29. Wachman, A. 2006. Effects of operational sex ratio and competitor-to-resource ratio on intra-

- sexual aggression and courtship behaviour in groups of convict cichlids (*Archocentrus nigrofasciatus*). Now works in the pharmaceutical industry.
30. Cosman, P. 2006. Sex biased arrival timing among three species of freshwater fish from Lake Ontario. MES student, York University.
 31. D'Astous, A. 2008. Who's next? Comparatives analyses of endangered and non-endangered Canadian terrestrial mammals. Now an MSc student at Laval.
 32. Toobaie, A. 2008. Diel activity patterns of the fish community in a temperate stream, Catamaran Brook, New Brunswick. Now an MSc student in my lab.
 33. Robichaud, K. 2010. The effect of habitat structure on food monopolization and aggression in juvenile convict cichlids.
 34. Cameron, V. 2010. Effect of synchrony of settlement on the size and density of territories established by rainbow trout (*Oncorhynchus mykiss*).
 35. Desjardins, C. 2011. Does growth rate and territory size in young-of-the-year Atlantic salmon (*Salmo salar*) depend on the population density? Now an MSc student at Carleton University.
 36. Noonan, M. 2011. A quantitative analysis of fish passage efficiency. Now a PhD student and Rhodes Scholar at Oxford.
 37. McGourdji, C. 2011. Climate change and other threats to endangered species in Canada. Now working in my laboratory on a publication from her thesis.
 38. Diaconescu, M. 2011. Ephemeral patch defence by convict cichlids: effects of spatial clumping and body Size. Now in Medical School.
 39. Asselin, A.-M. 2013. Sustainable harvest: lessons from worldwide fisheries management. Now an intern at the Convention on Biodiversity in Montreal.
 40. Stein, M. 2014. Habitat selection in convict cichlids (*Archocentrus nigrofasciatus*): it's not all about food.
 41. Young, A. 2014. Towards a sustainable future: a synthesis of theory and data on the cooperative use of resources. Now in Medical School.
 42. Mignelli, E. 2014. The effects of habitat complexity on aggression, foraging rate, population density, and territory size: a meta-analysis. Now applying for Veterinary School.
 43. Hill, N. 2015. The niche of the juvenile Atlantic salmon: a quantitative review.
 44. Prevost, A. 2015. Habitat use and preference in young-of-the-year Atlantic salmon stocked into the Boquet River, New York.
 45. Cuddihy, G. 2015. Climate change as a threat to the endangered wildlife of Canada.

Graduate Students

1. Grand, T.C. 1992. The effects of the spatial predictability of food on the defence behaviour and distribution of juvenile convict cichlids (*Cichlasoma nigrofasciatum*). MSc thesis. Completed a PhD and NSERC postdoctoral fellowship. Now an environmental consultant in Vancouver.
2. Keeley, E.R. 1993. Allometric and ecological determinants of territory size in juvenile Atlantic salmon. MSc thesis. Completed a PhD at the University of British Columbia. Now a Professor, Department of Biological Sciences, Idaho State University, Pocatello.
3. Bryant, M.J. 1993. Synchrony of food arrival and the variance in egg production and growth

- rate of female Japanese medaka. MSc thesis. Now a Professor at the California Institute of the Arts, Valencia, California.
4. Robb, S.E. 1996. Aggression, monopolization and growth depensation within groups of Japanese medaka: interactions between the temporal and spatial clumping of food. MSc thesis. Now a high school teacher (Biology and Geography) in Kingston, Ontario.
 5. Steingrímsson, S.Ó. 1996. The allometry of territory size and metabolic rate as predictors of self-thinning in young-of-the-year Atlantic salmon. MSc thesis. Now a Professor at Holar Agriculture College in Iceland.
 6. Prawn, J.C. 1998. Optimal territory size in the convict cichlid. MSc thesis. Now a Research Officer with CBC, Toronto.
 7. Johnson, C.A. 2001. Co-supervised with L-A. Giraldeau. Patch size and aggression within foraging house sparrow flocks. MSc thesis. Now an Ecologist with Environment Canada in Ottawa.
 8. Girard, Isabelle. 2002. Habitat preferences of young-of-the-year Atlantic salmon in relation to foraging and growth rate in Catamaran Brook, New Brunswick. MSc thesis. Now a Consulting biologist with SNC Lavalin in Vancouver.
 9. Breau, Cindy. 2003. Individual variability in activity patterns of juvenile Atlantic salmon (*Salmo salar*) MSc thesis. Now a Biologist with DFO in Moncton.
 10. Imre, Istvan. 2003. Territoriality and population regulation in juvenile salmonids. PhD thesis. Now a Professor at Algoma University College in Sault-Ste-Marie, Ontario.
 11. Foellmer, Matthias W. 2004. Co-supervised with Daphne Fairbairn. Sexual dimorphism and sexual selection in the highly dimorphic orb-weaving spider *Argiope aurantia* (Lucas). Now a Professor at Adelphi University, New York City.
 12. Steingrímsson, S.Ó. 2004. Mobility and home range size of individually marked young-of-the-year Atlantic salmon in Catamaran Brook, New Brunswick. PhD thesis. Now a Professor at Holar Agriculture College in Iceland.
 13. Dolinsek, Ivan. 2004. Co-supervised with Pascale Biron. The effect of visibility on the population density of juvenile Atlantic salmon. MSc thesis. Now a PhD student in my lab.
 14. Kim, Jaewoo. 2005. Effects of patch shape and competitor density on economic defendability. MSc thesis. Now a PhD student in my lab.
 15. Brodeur, Nathalie. 2006. Dispersion patterns of kin in young-of-the-year Atlantic salmon (*Salmo salar* L.) in Catamaran Brook, New Brunswick. MSc thesis, co-supervised with S. Dayanandan. Now a PhD student at Université Laval.
 16. Wood, Jackie. 2008. The effects of population density on territory size and population regulation in juvenile rainbow trout, *Oncorhynchus mykiss*. MSc thesis. Now a PhD student at Concordia University.
 17. Clark, Lia. 2009. Competitive aggression in male and female Japanese medaka (*Oryzias latipes*) in relation to the operational sex ratio. MSc thesis.
 18. Kim, Jaewoo. 2009. Co-supervised with Grant Brown. Behavioural and ecological implications of predation risk in juvenile Atlantic salmon. PhD thesis. Now a Visiting Fellow at the Canada Centre for Inland Waters, Burlington, Ontario.
 19. Lindeman, Amanda. 2010. Effects of arrival synchrony and population density on territory size and growth rate in stream salmonids. MSc thesis. Now a PhD student in Biology at

Carleton University.

20. Dolinsek, Ivan. 2011. Co-supervised with Dr. Robert McLaughlin. The ecology of fish movement in six Lake Ontario tributaries. PhD thesis. Now a PDF at the Université de Montréal.
21. Toobaie, Asra. 2011. Effect of food abundance on aggressiveness and territory size of juvenile rainbow trout, *Oncorhynchus mykiss*. MSc thesis. Now an MBA student at UQAM.
22. Roy, Mathieu. 2012. Co-supervised with Dr. Andre Roy. Habitat variability and the individual behaviour of juvenile Atlantic salmon. PhD thesis, Université de Montréal. Now a PDF at Université Laval.
23. Gray, Queenie. 2013. Co-supervised with Dr. Dylan Fraser. Interpreting impacts of exotic trout populations on mountain lakes in the era of ecological restoration. MSc thesis. Now a biologist with Parks Canada.
23. Chuard, Pierre. Co-supervised with Dr. Grant Brown. Competition in the Trinidadian guppy for food and mates: effects of OSR, gender, and the acute and chronic risk of predation. PhD thesis, in progress.
24. Bilhete, Caroline. The effects of habitat structure on the behaviour of young-of-the-year Atlantic salmon. MSc thesis, in progress.
25. Brunsdon, Eric. The effectiveness of stocking as part of the restoration of Atlantic salmon in the Boquet River, New York. MSc thesis, in progress.
26. Church, Kathleen. Personality and applied fish ecology. PhD thesis, in progress.
27. Baril, Andre-Marcel. Co-supervised with Dr. Pascale Biron. Spawning habitat use in the lake sturgeon. MSc thesis, in progress.

Service

To the Department

- 1989-1996: Coordinator of Departmental seminars
- 1992-1995: Member of a Task Force to reorganize first year courses in the Department of Biology
- 1992-1998: Academic Advisor
- 1997-1998: Member of Curriculum Committee
- 1997-1998: Member of the Undergraduate Committee
- 1998-1999: Coordinator of Departmental seminars
- 1998-2002: Member of the Graduate Studies Committee
- 1998-2002: Member of the Departmental Personnel Committee
- 2000-2001: Chair of the Departmental Self-appraisal Committee
- 2001-2002: Coordinator of the Honours thesis program (BIOL 490)
- 2003-2006: Member of the Personnel Committee
- 2003-2005: Member of the Graduate Studies Committee
- 2003-----: Chair of the Moving Committee
- 2004-2006: Chair of the Personnel Committee
- 2004-2005: Member of the Curriculum Committee

2006-2009: Chair of the Department
2010-present: Departmental representative on CUFA Council
2011-present: Member of the Personnel Committee
2013-2014: Member of the Graduate Studies Committee
2013-2015: Member of the Curriculum Committee

To the Faculty

1994-1995: Member of the Faculty Appraisal Committee for the Liberal Arts College
1995-1996: Member of the Faculty Appraisal Committee for the Science College
1995-1998: Member of Arts and Science Faculty Panel (Academic Regulations Regarding Cheating)
1996-1998: Member of General Research Fund Evaluation Committee
1997-----: Member of the Science College
2006-2009: Member of the Arts and Science Faculty Council
2007-2009: Member of Steering Committee for Arts and Science Faculty Council
2007-2008: Member of the Panel to Review the Future of the Department of Education
2009-----: Chair of the Hiring Committee for the Johnson Chair in Canadian Irish Studies
2011-2012: Acting Co-Principal of Loyola International College, Concordia University.
2012-2014: Member of the Faculty Promotion and Tenure Committee
2013-----: Member of the Faculty Curriculum Committee

To the University

1993-1995: Member of the Concordia University Animal Care Committee
1996-1997: Chair, University Animal Care Committee
1998-2001: Member of the Academic Review Board
1998-2001: Member of the Undergraduate Scholarships and Awards Committee
1998-2000: Member, Visiting Lecturers Committee
1998-2000: Member, Colleges Visiting Lecturers Committee
2000-2001: Member of the Concordia University Animal Care Committee
2003-2006: Member of Senate
2004-2005: Department Leader, Concordia University Community Campaign
2009-2010: Department Leader, Concordia University Community Campaign
2009-2015: Member of Senate
2013-2014: Member of Senate Steering Committee

To the Academic Community

Member of the Evolution and Ecology Grant Selection Committee (18) for NSERC, Natural Sciences and Engineering Research Council of Canada, 2001-2004.
Invited External Participant in an Interdisciplinary Science Forum for AquaNet: Enhancing Sectoral Efficiency and Identifying Future Directions in Finfish and Shellfish Aquaculture, Fredericton, N.B., 16-18 June, 2003

Associate Editor, Canadian Journal of Fisheries and Aquatic Sciences, 2004-2013.

Member of the Major Facilities Access Committee for Grant Selection Committee 18, NSERC, 2004-2005

Review Grant Proposals for the Natural Environment Research Council (United Kingdom), Great Lakes Fishery Commission, National Science Foundation (US), and Killam Foundation

Member of the Freshwater Fishes Species Specialist Committee of COSEWIC (Committee on the Status of Endangered Wildlife in Canada), 2010-2018

Referee for:

American Naturalist

Animal Behaviour

Behavioral Ecology

Behavioral Ecology and Sociobiology

BioScience

Canadian Journal of Zoology

Copeia

Ecology

Ecology of Freshwater Fish

Environmental Biology of Fishes

Ethology

Journal of Fish Biology

Proceedings of the Royal Society B

Scientific Meetings:

- Co-organizer of the Québec Animal Behaviour Conference (SQEBC), 8-10 November 2013 at Concordia
- Co-organizer of the Québec Animal Behaviour Conference (SQEBC), 4-6 November 2005 at Concordia.
- Member of the Scientific Committee for ISBE 2002, 7-12 July 2002, Montréal.
- Co-organizer of the Québec Animal Behaviour Conference (SQEBC), 6-8 November 1998 at Concordia.
- Program Chair for the Canadian Conference for Fisheries Research, 4-6 January 1996, Montréal.

Membership:

International Society for Behavioral Ecology

Animal Behaviour Society

Canadian Society for Ecology and Evolution

Société québécoise pour l'étude biologique du comportement