

Robert F. Rockwell

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Professional Experience

Biology Department, City College of The City University of New York
Professor (1986-present); Associate Professor (1981-1985); Assistant Professor (1976-1980); Chair of Graduate Studies (1993-1996; 1997-1998)
The Graduate School and University Center, City University of New York
Professor (1986-present)
Chair of Ecology and Evolutionary Biology subprogram of the Biology Ph.D. program (2002-2010)
Ornithology Department, American Museum of Natural History
Research Associate – non-salaried (1986-present)
Center for Environmental Research and Conservation, Columbia University
Adjunct Senior Scientist – non-salaried (1999-present)
Richard Gilder Graduate School, American Museum of Natural History
Adjunct Professor – non-salaried (2011-present)
Institute of Arctic Biology, University of Alaska Fairbanks
Principal Research Scientist, non-salaried (2012-present)
Hudson Bay Project Corporation
President – non-salaried (1996-present)

Education

Ph.D. Department of Biology, Queen's University, Kingston, Ontario (1975)
M.Sc. Department of Biology, Wright State University, Dayton, Ohio (1971)
B.Sc. Department of Biology, Wright State University, Dayton, Ohio (1969)

Professional Societies

American Association for the Advancement of Science, American Ornithologists' Union (Fellow), American Society of Naturalists, Association of Field Ornithologists, British Ecological Society, Cooper Ornithological Society, The Ecology Society, Society for the Study of Evolution, The Wildlife Society, Wilson Ornithological Society

Teaching Experience

Graduate - Biostatistics, Biomathematics, Simulation Modeling, Population Genetics, Population Ecology, Conservation Biology, Community Ecology, Ecological Genetics, Molecular Ecology
Undergraduate - Conservation Biology, Quantitative Ecology, Population and Community Biology, Introductory Biology, Medical Genetics

Service

Chair of the Ecology and Evolutionary Biology section of the CUNY Ph.D. program in Biology – 2002 to -2010
Chair of the PSC/CUNY Faculty Research Award Program in Biology -1988 to 2008.
Member of the joint Canada/US/Mexico Habitat Working Group examining the impact of overabundant goose populations on habitat in both arctic and urban regions – 1995 to - present
Member of the Chapman Fellowship Committee at the American Museum of Natural History – 2000 to present
Reviewer for: NSF, NSERC (Canada), American Naturalist, Arctic, Auk, Ecology, Ecological Monographs, Ecoscience, Conservation Biology, Canadian Field Naturalist, Canadian Journal of Zoology, Condor, Journal of Animal Ecology, Journal of Field Ornithology, Journal of Wildlife Management (Associate Editor 1996-97), Oikos, Polar Biology, Wilson Bulletin

Current Research Support

My long-term field research program on the population dynamics of lesser snow geese, their interplay with other plant and animal species and their impact on arctic coastal and near-coastal ecosystems of the Hudson and

James Bay Lowlands is funded as the Hudson Bay Project (joint with my partners KF Abraham and DN Koons) by:

Arctic Goose Joint Venture for \$300,000.00 from 2007 to 2011
Arctic Goose Joint Venture for \$300,000.00 from 2012 to 2016
Central Flyway Council for \$125,000 from 2006 to 2010
Central Flyway Council for \$125,000 from 2011 to 2015
Mississippi Flyway Council for \$125,000 from 2006 to 2011
Mississippi Flyway Council for \$125,000 from 2012 to 2016

I also hold grants targeted at specific aspects of that overall research:

Habitat Assessment within Wapusk National Park. Parks Canada for \$165,000 for 2006-2014.

Snow goose banding program in the Cape Churchill region (as part of an international monitoring program). Canadian Wildlife Service for \$475,000.00 from 1998 to 2013. (The actual monetary value of this grant increases as it is tied in part to direct payment of helicopter hours and rates increases annually.)

Snow goose banding program in the Cape Churchill region. Mississippi and Central Flyway Councils for \$100,000 for 2014-2018.

How do environmental conditions during development affect senescence & consequent population dynamics? National Science Foundation for \$210,401 for 2011-2012. (held jointly with D.N. Koons (PI) and O. Gimenez.)

List of Publications

- Gormezano, LJ and RF Rockwell. 2013. Dietary composition and spatial patterns of polar bear foraging on land in western Hudson Bay. *BMC Ecology* 13:51. doi:10.1186/1472-6785-13-51.
- Gormezano, LJ and RF Rockwell. 2013. What to eat now? Shifts in terrestrial diet in western Hudson Bay. *Ecology and Evolution* 3:3509–3523. doi:10.1002/ece3.740.
- Iles, D.T., R.F. Rockwell, P. Matulonis, G.J. Robertson, K.F. Abraham, C. Davies, and D.N. Koons. 2013. The effects of predators, alternative prey, and climate on common eider nesting success. *Journal of Animal Ecology* 82:683-693.
- Koons, DN, RF Rockwell, and LM Aubry. 2013. Effects of exploitation on an overabundant species: the lesser snow goose predicament. *Journal of Animal Ecology* (online early) doi:10.1111/1365-2656.12133.
- Peterson, SL, RF Rockwell, CR Witte and DN Koons. 2013. The legacy of destructive snow goose foraging on supratidal marsh habitat in the Hudson Bay Lowlands. *Arctic, Antarctic, and Alpine Research* 45:575-583.
- Aubry, L.M., R.F. Rockwell, E.G. Cooch, R.W. Brook, C.P. Mulder, and D.N. Koons. 2013. Climate, phenology, and habitat degradation: drivers of gosling body condition and juvenile survival in lesser snow geese. *Global Change Biology* 19:149–160.
- Iles, DT, SL Peterson, LJ Gormezano, DN Koons and RF Rockwell. 2013. Terrestrial predation by polar bears: not just a wild goose chase. *Polar Biology* 36:1373-1379.
- Weckel, M and RF Rockwell. 2013. Can controlled bow hunts reduce overabundant white-tailed deer populations in suburban ecosystems? *Ecological Modelling* 250:143-154.
- Abraham, K. F., R. L. Jefferies, R. T. Alisaukas, and R. F. Rockwell. 2012. Northern wetland ecosystems and their response to high densities of lesser snow geese and Ross's geese. Pages 9-45. In Leafloor, J. O., T. J. Moser, and B. D. J. Batt (editors). Evaluation of special management measures for midcontinent lesser snow geese and Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C. and Canadian Wildlife Service, Ottawa, Ontario.
- Rockwell, RF, K Dufour, E Reed and DN Koons. 2012. Modeling the Mid-continent Population of Lesser Snow Geese. Pages 178-201. In Leafloor, J. O., T. J. Moser, and B. D. J. Batt (editors). Evaluation of special management measures for midcontinent lesser snow geese and Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C. and Canadian Wildlife Service, Ottawa, Ontario.

- Dufour, K, RT Alisauskas, RF Rockwell and E Reed. 2012. Temporal variation in survival and productivity of mid-continent lesser snow geese and its relation to population reduction efforts. Pages 95-131. In Leafloor, J. O., T. J. Moser, and B. D. J. Batt (editors). Evaluation of special management measures for midcontinent lesser snow geese and Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C. and Canadian Wildlife Service, Ottawa, Ontario.
- Nagy, C, K Bardwell, RF Rockwell, M Weckel and R Christie. 2012. Validation of a citizen science-based model of site occupancy for Eastern Screech Owls with systematic data in suburban New York Connecticut. *Northeast Naturalist* 19:143-158.
- Winiarski, KJ, SR MacWilliams and RF Rockwell. 2012. Rapid environmental degradation in a subarctic ecosystem influences resource use of a keystone avian herbivore. *Journal of Animal Ecology* 81:1132–1142.
- French, HT and RF Rockwell. 2011. Climate change and avian population ecology in Europe. *Nature Education Knowledge* 2(10)1.
- Nagy, C. and RF Rockwell. 2011. Identification of individual Eastern Screech-Owls (*Megascops asio*) via vocalization analysis. *Bioacoustics* 21:127-140.
- Weckel, ME, RF Rockwell and F Secret. 2011. A modification of Jacobson et al.s' (1997) individual branch-antlered male method for censusing white-tailed deer. *Wildlife Society Bulletin* 35:445-451..
- Weckel, ME, RF Rockwell and A Wincorn. 2011. The sustainability of controlled archery programs: the motivation and satisfaction of suburban hunters. *Wildlife Society Bulletin* 35:330-337.
- Belanger, DH, SL Perkins and RF Rockwell. 2011. Inference of population structure and patterns of gene flow in canine heartworm (*Dirofilaria immitis*). *Journal of Parasitology* 97:602-609.
- Rockwell, RF, LJ Gormezano and DN Koons. 2011. Trophic matches and mismatches: Can polar bears reduce the abundance of nesting snow geese in western Hudson Bay? *Oikos* 120:696-709.
- Alisauskas, RT, RF Rockwell, KW Dufour, EG Cooch, G Zimmermen, KL Drake, JO Leafloor, TJ Moser and E Reed. 2011. Effect of population reduction efforts on harvest, survival and population growth of Midcontinent lesser snow geese. *Wildlife Monographs* 179:1-42.
- Hobson, K, C Sharp, RL Jefferies, RF Rockwell and KF Abraham. 2011. Nutrient allocation strategies to eggs by lesser snow geese at a sub-Arctic colony. *Auk* 128:156-165.
- Mockrin, M, RF Rockwell, KH Redford and NS Kueler. 2011. Landscape features determine the distribution and sustainability of ungulate hunting in northern Congo. *Conservation Biology* 25:514-525.
- Aubry, LM, RF Rockwell and DN Koons. 2010. Metapopulation dynamics of mid-continent Lesser Snow Geese: Implications for management. *Human Wildlife Conflicts* 4:11-32.
- Rockwell, RF and LJ Gormezano. 2009. The early bear gets the goose: climate change, polar bears and lesser snow geese in western Hudson Bay. *Polar Biology* 32:539-547.
- Rockwell, RF, KF Abraham, CR Witte, P Matulonis, M Usai, D Larsen, F Cooke, D Pollak and RL Jefferies. 2009. *The Birds of Wapusk National Park*. Wapusk National Park of Canada Occasional Paper 1:1-47. Parks Canada, Winnipeg.
- Gilliland, SG, HG Gilchrist, RF Rockwell, GJ Robertson, J-P Savard, F Merkel and A Mosbech. 2009. Evaluating the sustainability of harvest among northern Common Eiders in Greenland and Canada. *Wildlife Biology* 15:24-36.
- Rockwell, RF, LJ Gormezano and D Hedmann. 2008. Grizzly Bears in Wapusk National Park, Northeastern Manitoba. *Canadian Field-Naturalist* 122(4) (323-326).
- Zaikowski, L, KT McDonnell, RF Rockwell and F Rispoli. 2008. Temporal and spatial variations in dissolved oxygen on New York South Shore Estuary tributaries: Carmans, Patchogue, and Swan Rivers. *Estuaries and Coasts* 31:85–100.
- Mellor, AA and RF Rockwell. 2006. Habitat Shifts and parasite loads of Lesser Snow Geese (*Chen caerulescens caerulescens*). *Écoscience* 13(4):497-502.
- Koons, DN, RF Rockwell and JB Grand. 2006. Population momentum: implications for wildlife management. *Journal of Wildlife Management* 70:19-26.

- Kajumbula H, RG Wallace, J-C Zong, J Hokello, N Sussman, S Simms, RF Rockwell, R Pozos, GS Hayward and W Boto. 2006. Ugandan KSHV phylogeny: evidence for cross-ethnic transmission of viral subtypes. *Intervirology* 49:133-143.
- Pezzanite, B, RF Rockwell, JC Davies, MJJE Loonen and RJ Seguin. 2005. Has habitat degradation affected foraging behaviour and reproductive success of lesser snow geese (*Chen caerulescens caerulescens*)? *Ecoscience* 12:439-446.
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- Flint, PL, A Fowler and RF Rockwell. 1999. Modeling bird mortality associated with the M/V Citrus oil spill off St. Paul Island, Alaska. *Ecological Modeling* 117:261-267.
- Cooch, EG, A Dzubin and RF Rockwell. 1999. Using body size to estimate gosling age. *Journal of Field Ornithology* 70:214-229.
- Cooch, EG, DB Lank, RF Rockwell and F Cooke. 1999. Body size and recruitment in snow geese. *Bird Study* 46: S112-119.
- Flint, PL, JB Grand and RF Rockwell. 1998. A model of northern pintail productivity and population growth rate. *Journal of Wildlife Management* 62:1110-1118.

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- Rockwell, RF, EG Cooch and Solange Brault. 1997. Dynamics of the mid-continent population of lesser snow geese - Projected impacts of reductions in survival and fertility on population growth rates. Pages 73-100. In: B. Batt (ed.) *Arctic Ecosystems in Peril: Report of the Arctic Goose Habitat Working Group*. Arctic Goose Joint Venture, Canadian Wildlife Service, Ottawa and US Fish and Wildlife Service, Washington, D.C. (ISBN 0-9617279-3-4).
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- Schmutz, JA, RF Rockwell and MR Petersen. 1997. Relative effects of survival and reproduction on the population dynamics of emperor geese. *Journal of Wildlife Management* 61:191-201.
- Abraham, KF, RL Jefferies, RF Rockwell and CD MacInnes. 1996. Why are there so many white geese in North America. *Proceedings of the 7th International Waterfowl Symposium, Ducks Unlimited, Memphis.*
- Rockwell, RF, KF Abraham and RL Jefferies. 1996. Tundra under siege. *Natural History* 105:20-21.
- Cooke, F, RF Rockwell and DB Lank. 1995. *The Snow Geese of La Pérouse Bay: Natural Selection in the Wild*. Oxford University Press, Oxford. 289 pp.
- Robertson, GJ, MA Owen and RF Rockwell. 1995. Responses of lesser snow geese to artificially induced hatching asynchrony and increased clutch size. *Auk* 112:790-794.
- Rockwell, RF, MR Petersen and JA Schmutz. 1995. *The Emperor Goose: An Annotated Bibliography*. University of Alaska Press, Fairbanks. 77pp.
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- Robertson, GJ, EG Cooch, DB Lank, RF Rockwell and F Cooke. 1994. Female age and egg size in the lesser snow goose. *Journal of Avian Biology* 25:149-155.
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- Cooch, EG, RL Jefferies, RF Rockwell and F Cooke. 1993. Environmental change and the cost of philopatry in lesser snow geese. *Oecologia* 93:128-138.
- Olvera, O, RF Rockwell, ME de la Rosa, J Guzman, MJ Laverde and L Levine. 1993. Studies of sibling *Drosophila* species from Laguna Verde, Vera Cruz, Mexico V. Temporal stability in dispersive behavior. *Southwestern Naturalist* 38:15-18.

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- Cooke, F, JC Davies and RF Rockwell. 1990. Body size and fecundity in lesser snow geese: A response to R.T. Alisauskas and C.D. Ankney. *Auk* 107:444-446.
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