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## Christa P. H. Mulder

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**Personal:** Dutch citizenship, US permanent residency.

**Education:** University of Alaska - Fairbanks, Alaska, USA. Ph.D. in Biology, December 1996  
Queen's University, Kingston, Ontario, Canada. M.Sc. in Biology, 1991  
Bates College, Lewiston, Maine, USA. B.A., High Honors in Biology, 1988

### Primary research interests:

1. Plant-animal interactions, particularly herbivory, physical effects of animals on plants, and impacts of climate change on phenology of plants and herbivores.
2. Invasive plant species in Alaska.
3. Diversity – ecosystem functioning relationships in vascular plants and bryophytes.

### Professional experience:

Chair, Department of Biology and Wildlife, University of Alaska Fairbanks (UAF) (July 2010 - present).  
Professor, Institute of Arctic Biology and Department of Biology and Wildlife, University of Alaska Fairbanks (July 2012-present).  
Assistant Department Chair (Graduate Program), Department of Biology and Wildlife, University of Alaska Fairbanks (January – June 2010).  
Associate Professor, Institute of Arctic Biology and Department of Biology and Wildlife, University of Alaska Fairbanks (July 2006- June 2012).  
Assistant Professor, Institute of Arctic Biology and Department of Biology and Wildlife, University of Alaska Fairbanks (Jan. 2001 - June 2006).  
Lecturer (Assistant Professor) in Ecology, School of Biological Sciences, Victoria University of Wellington (VUW), New Zealand (Feb. 1998 - Dec. 2000).  
Post-doctoral fellow, Swedish University of Agricultural Sciences, Umeå, Sweden (May 1996- Jan 1998).

### Other Associations:

Senior Investigator, Bonanza Creek Long Term Ecological Research Site, 2010-present  
Principal Investigator, Hudson Bay Project Team, 2012-present

### Grants Awarded:

2009 United States Department of Agriculture: “Are Alaskan Pollinators Abandoning Native Berries for an Exotic Clover? Implications for Invasive Plant Management on Fruit Production” (PI, \$494,000)  
2007, 2008 National Park Service: “Data Collection for Modeling Invasive Plant Spread via Burned Lands in Alaska” (PI, \$14,000 in 2007, \$20,000 extension in 2008)

- 2007 National Science Foundation Research Coordination Network: “SEAPRE: Seabird Islands and Introduced Predators: Impacts of Presence and Eradication on Island Function” (PI, \$247,000).
- 2006 Center for Invasive Plant Management: “Assessing wildfire burn susceptibility to invasive plant colonization in black spruce forests of interior Alaska”. (PI; with K. Villano and T. Hollingsworth, \$5,000).
- 2003 National Science Foundation: “Rats on islands: direct and indirect effects on plant communities” (PI, \$392,000).
- 2003 Western Regional Center (WESTGEC) of the National Institute for Global Environmental Change (NIGEC): “Will global warming alter plant parasite loads in the boreal understory?” (Co-PI; B. Roy PI., \$244,000).
- 2002 Marsden Foundation (New Zealand): “Impacts of alien organisms on ecosystem functioning: a test using island ecosystems” (with D. Wardle, P. Bellingham, D. Towns, G. Yeates and W. Williamson, NZ \$600,000)
- 1999 Research grant, Victoria University of Wellington (NZ \$3000)
- 1997 Research grant, Oscar and Lilli Lamm Foundation, Sweden (SEK 72,000)
- 1993 Research Grant, Center for Global Change and Arctic System Research, UAF (\$1500)

### **Scholarships, Fellowships, and Awards:**

- 2008-2009 National Education Fellow in the Life Sciences, National Academies of Science, USA.
- 2007-2008 Outstanding Teaching Award, College of Natural Science and Mathematics, UAF
- 1995 Dissertation Year Fellowship, University of Alaska Fairbanks
- 1991-1993 Chancellor's Fellowship, UAF
- 1991-1992 National Science and Engineering Research Council Post-Graduate Scholarship 3 (declined)
- 1990-1991 National Science and Engineering Research Council Post-Graduate Scholarship 2
- 1989-1990 Queen's Graduate Fellowship, Queen's University
- 1988 Dean's Merit Award, University of Michigan
- 1988 Phi Beta Kappa Honors Society
- 1988 Bates Key Honors Society, Bates College
- 1988 Paul Hardy Award, Bates College
- 1985-1988 Dean's Award, Bates College

### **Scientific Publications:**

- 49) Moles, A.T. , B. Peco, I.R. Wallis, W.J. Foley, A.G.B. Poore, E.W. Seabloom, P.A. Vesk, A. J. Bisigato, L. Cella-Pizarro, C. J. Clark, P.S. Cohen, W. K. Cornwell, W. Edwards, R. Ejrnæs, T. Gonzales-Ojeda, B.J. Graae, G. Hay, F.C. Lumbwe, B. Magaña-Rodríguez, B. D. Moore, P.L. Peri, J.R. Poulsen, J.C. Stegen, R. Veldtman, H. von Zeipel, N.R. Andrew, S.L. Boulter, E. T. Borer, J.H.C. Cornelissen, A.G. Farji-Brener, J. DeGabriel, E. Jurado, L.A. Kyhn, B. Low, C.P.H. **Mulder**, K. Reardon-Smith, J. Rodríguez-Velázquez, A. De Fortier, Z. Zheng, P.G. Blendinger, B.J. Enquist, J. M. Facelli, T. Knight, J.D. Majer, M. Martínez-Ramos, P. McQuillan, F.K.C. Hui. Correlations between physical and chemical defences in plants: trade-offs, syndromes, or just many different ways to skin a herbivorous cat? *New Phytologist*, in press.

- 48) Aubry, L.M., R.F. Rockwell, E.G. Cooch, R.W. Brook, C.P.H. **Mulder**, and D.N Koons. Climate change, phenology and habitat degradation: drivers of gosling body condition and juvenile survival in lesser snow geese. *Global Change Biology*, in press.
- 47) Towns, D.R., P.J. Bellingham, C.P.H. **Mulder**, and P.O'B. Lyver. 2012. A research strategy for biodiversity conservation on New Zealand's offshore islands. *New Zealand Journal of Ecology* 36:1-20.
- 46) Moles, A.T., I. R. Wallis, W. J. Foley, D. I. Warton, J.C. Stegen, A.J. Bisigato, L. Cella-Pizarro<sup>7</sup>, C. J. Clark, P. S. Cohen, W. K. Cornwell, W. Edwards, R. Ejrnæs, T. Gonzales-Ojeda, B. J. Graae, G. Hay, F.C. Lumbwe, B. Magaña-Rodríguez<sup>2</sup>, B.D. Moore, P.L. Peri, J.R. Poulsen, R. Veldtman, H. von Zeipel, N. R. Andrew, S. L. Boulter, E. T. Borer, F.Fernández Campón, M. Coll, A. G. Farji-Brener, J. De Gabriel, E. Jurado, L. A. Kyhn, Bill Low, C. P. H. **Mulder**, K. Reardon-Smith, J. Rodríguez-Velázquez, E.W. Seabloom, P.A. Vesk, A. van Cauter, M. S. Waldram, Z. Zheng, P.G. Blendinger, B.J. Enquist, J.M. Facelli, T. Knight, J. D. Majer, M. Martínez-Ramos, P. McQuillan, L. D. Prior. 2011. Putting plant defenses on the map: a test of the idea that plants are better defended at lower latitudes. *New Phytologist* 191: 777-788.
- 45) Rohrs-Richey, J.K., C.P.H. **Mulder**, L.M. Winton, and G. Stanosz. 2011. Physiological performance of an Alaskan shrub (*Alnus fruticosa*) under climate-related stressors: implications from experimental disease (*Valsa melanodiscus*) and water stress. *New Phytologist* 189 (1):295-307.
- 44) Durrett, M.S., and C.P.H. **Mulder**. 2011. The state of seabird island ecology: current synthesis and global outlook. In: Mulder, C.P.H., W.B. Anderson, D.R. Towns and P.J. Bellingham (eds). Seabird Islands: Ecology, Invasion, and Restoration. *Oxford University Press*, New York.
- 43) **Mulder**, C.P.H., H. Jones, K. Kameda, C. Palmborg, S. Schmidt, J.C. Ellis, J L. Orrock, D.A. Wait, D.A. Wardle, L. Yang, H. Young, D.A. Croll, and E. Vidal. 2011. Impacts of seabirds on plant and soil properties. In: Mulder, C.P.H., W.B. Anderson, D.R. Towns and P.J. Bellingham (eds). Seabird Islands: Ecology, Invasion, and Restoration. *Oxford University Press*, New York.
- 42) Smith, J.L., C.P.H. **Mulder**, and J.C. Ellis. 2011. Seabirds as ecosystem engineers: nutrient inputs and physical disturbance. In: Mulder, C.P.H., W.B. Anderson, D.R. Towns and P.J. Bellingham (eds). Seabird Islands: Ecology, Invasion, and Restoration. *Oxford University Press*, New York.
- 41) Anderson, W.B., and C.P.H. **Mulder**. 2011. An introduction to seabird islands. In: Mulder, C.P.H., W.B. Anderson, D.R. Towns and P.J. Bellingham (eds). Seabird Islands: Ecology, Invasion, and Restoration. *Oxford University Press*, New York.
- 40) **Mulder**, C.P.H. and J.C. Ellis. 2010. Seabird Island Ecology. In: Encyclopedia of Life Sciences 2010, John Wiley & Sons, Ltd: Chichester <http://www.els.net/> DOI: 10.1002/9780470015902.a0022557
- 39) Hector, A., Y. Hautier, P. Saner, L. Wacker, R. Bagchi, J. Joshi, M. Scherer-Lorenzen, E.M. Spehn, E. Bazely-White, M. Wilemann, M.C. Caldeira, P.G. Dimitrakopoulos, J.A. Finn, K. Huss-Danell, A. Jumpponen, C.P.H. **Mulder**, C. Palmborg, J.S. Pereira, A.S.D. Simantsioura, A.C. Terry, A.Y. Troumbis, B. Schmid, and M. Loreau. 2010. General stabilizing effects of plant diversity on grassland productivity through population asynchrony and overyielding. *Ecology* 91: 2213-2220
- 38) Grant-Hoffman, M.N., C.P. **Mulder**, and P. Bellingham. 2010. Invasive rats alter woody seedling composition on seabird-dominated islands in New Zealand. *Oecologia* 163: 449-460.

- 37) Grant-Hoffman, M.N., C.P.H. **Mulder**, and P. Bellingham. 2010. Effects of invasive rats and burrowing seabirds on seeds and seedlings on New Zealand islands. *Oecologia* 162 : 1005-1016.
- 36) Bellingham, P.J., D.R. Towns, E.K. Cameron, J. Davis, D.A. Wardle, J.M. Wilmshurst and C.P.H. **Mulder**. 2010. New Zealand island restoration: seabirds, predators, and the importance of history. *New Zealand Journal of Ecology* 34: 115-136.
- 35) Rixen, C., and C.P.H. **Mulder**. 2009. Species removal and experimental warming in a subarctic tundra community. *Oecologia* 161: 173-186.
- 34) Towns, D.R., D.A. Wardle, C.P.H. **Mulder**, G.W. Yeates, B.M. Fitzgerald, G.R. Parrish, P.J. Bellingham, and K.I. Bonner. 2009. Predation of seabirds by invasive rats: multiple indirect consequences for invertebrate communities. *Oikos* 118: 420-430.
- 33) **Mulder**, C.P.H., M.N. Grant-Hoffman, D. Towns, P. Bellingham, M. Durrett, D. Wardle, and T. Fukami. 2009. Direct and indirect effects of rats: will their eradication restore functioning of New Zealand seabird islands? *Biological Invasions* 11:1671-1688.
- 32) Wardle, D.A., Bellingham, P.J., Bonner, K.I., and **Mulder**, C.P.H. 2009. Indirect effects of invasive predators on plant litter quality, decomposition, and nutrient resorption on seabird-dominated islands. *Ecology* 90(2): 452-464.
- 31) **Mulder**, C.P.H., B. Roy, and S. Güsewell. 2008. Herbivores and pathogens on *Alnus viridis* subsp. *fruticosa* in Interior Alaska: I. Effects of leaf, tree, and neighbor characteristics on damage levels. *Botany* 86: 408-421.
- 30) Hector, A., J. Joshi, M. Scherer-Lorenzen, B. Schmid, E.M. Spehn, L. Wacker, M. Weilenmann, E. Bazeley-White, C. Beierkuhnlein, M.C. Calderia, P.G. Dimitrakopoulos, J.A. Finn, K. Huss-Danell, A. Jumpponen, P.W. Leadley, M. Loreau, C.P.H. **Mulder**, C. Neßhöver, C. Palmberg, D.J. Read, A.S.D. Siamantziouras, A.C. Terry, and A.Y. Troumbis. 2007. Biodiversity and ecosystem functioning: reconciling the results of experimental and observational studies. *Functional Ecology* 21: 998-1002.
- 29) Wardle, D.A., Bellingham, P.J., Fukami, T., and **Mulder**, C.P.H. 2007. Promotion of ecosystem carbon sequestration by invasive predators. *Biology Letters* 3: 479-482.
- 28) Rohrs-Richey, J. K., and C.P.H. **Mulder**. 2007. Effects of local changes in active layer and soil climate on seasonal foliar nitrogen concentrations of three boreal forest shrubs. *Canadian Journal of Forest Research* 37: 383-394.
- 27) Fukami, T., D. A. Wardle, P. J. Bellingham, C.P.H. **Mulder**, D.R. Towns, G.W. Yeates, K. I. Bonner, M. S. Durrett, M.N. Grant-Hoffman & Wendy M. Williamson. 2006. Above- and below-ground impacts of introduced predators on seabird-dominated islands. *Ecology Letters* 9: 1299-1307.
- 26) Wipf, S, C. Rixen, and C.P.H. **Mulder**. 2006. Advanced snowmelt causes shift towards positive neighbour interactions in a subarctic tundra community. *Global Change Biology* 12: 1496-1506.
- 25) Rixen, C., and C.P.H. **Mulder**. 2005. Improved water retention links high species richness with increased productivity in arctic tundra moss communities. *Oecologia* 146: 287-199.

- 24) Jumpponen, A., C.P.H. **Mulder**, K. Huss-Danell, and P. Högberg. 2005. Winners and losers in herbaceous plant communities: insights from foliar carbon isotope composition in monocultures and mixtures. *Journal of Ecology* 96: 1136-1147.
- 23) Spehn, E.M., A. Hector, J. Joshi, M. Scherer-Lorenzen, B. Schmid, E. Bazeley-White, C. Beierkuhnlein, M. C. Caldeira, M. Diemer, P. G. Dimitrakopoulos, J.A. Finn, H. Freitas, P. S. Giller, J. Good, R. Harris, P. Högberg, K. Huss-Danell, A. Jumpponen, J. Koricheva, P. W. Leadley, M. Loreau, A. Minns, C. P. H. **Mulder**, G. O'Donovan, S. J. Otway, C. Palmberg, J. S. Pereira, A. B. Pfisterer, A. Prinz, D. J. Read, E-D. Schulze, A-S. D. Siamantziouras, A. C. Terry, A. Y. Troumbis, F. I. Woodward, S. Yachi, J. H. Lawton. 2005. Ecosystem effects of biodiversity manipulations in European grasslands. *Ecological Monographs* 75: 37-63.
- 22) **Mulder**, C.P.H., E. Bazeley-White, P.G. Dimitrakopoulos, A. Hector, M. Scherer-Lorenzen, and B. Schmid. 2004. Species evenness and productivity in experimental plant communities. *Oikos* 107: 50-63.
- 21) Armbruster, W.S., C. Pélabon, T.F. Hansen and C.P.H. **Mulder**. 2004. Floral integration, modularity, and accuracy. In: Pigliucci, M. and Preston, K (eds.), *Phenotypic Integration: Studying the Ecology of Complex Phenotypes*. Oxford University Press.
- 20) **Mulder**, C.P.H., A. Jumpponen, P. Högberg, and K. Huss-Danell. 2002. How species richness and legumes affect nitrogen dynamics in experimental grassland communities. *Oecologia* 133: 412-421.
- 19) Armbruster, W.S., C.P.H. **Mulder**, B. Baldwin, S. Kalisz, B. Wessa, and H. Nute. 2002. Comparative analysis of late floral development and mating-system evolution in tribe Collinsieae (Scrophulariaceae s.l.). *American Journal of Botany* 89: 37-49.
- 18) Drake, D.R., C.P.H. **Mulder**, D.R. Towns, and C.H. Daugherty. 2002. The biology of insularity: an introduction. *Journal of Biogeography* 29: 563-569.
- 17) Jumpponen, A., P. Högberg, K. Huss-Danell and C.P.H. **Mulder**. 2002. Plants in mixed grassland communities express a plastic niche separation in nitrogen acquisition depth. *Functional Ecology* 16: 454-461.
- 16) Hector, A., Loreau, M., and Schmid, B., and the BIODEPTH project (Beierkuhnlein, C., Caldeira, M.C., Diemer, M., Dimitrakopoulos, P.G., Finn, J., Freitas, H., Giller, P.S., Good, J., Harris, R., Högberg, P., Huss-Danell, K., Joshi, J., Jumpponen, A., Körner, C., Leadley, P.W., Minns, A., **Mulder**, C.P.H., O'Donovan, G., Otway, S.J., Pereira, J.S., Prinz, A., Read, D.J., Scherer-Lorenzen, M., Schulze, E.-D., Siamantziouras, A.-S.D., Spehn, E.M., Terry, A.C., Troumbis, A.Y., Woodward, F.I., Yachi, S. & Lawton, J.H.). 2002. Biodiversity manipulation experiments: studies replicated at multiple sites. *Biodiversity and Ecosystem Functioning: synthesis and perspectives* (eds. M. Loreau, S. Naeem and P. Inchausti), pp. 36-46. Oxford University Press, Oxford.
- 15) Joshi, J., B. Schmid, M.C. Caldeira, P.G. Dimitrakopoulos, J. Good, R. Harris, A. Hector, K. Huss-Danell, A. Jumpponen, A. Minns, C.P.H. **Mulder**, J.S. Pereira, A. Prinz, M. Scherer-Lorenzen, A.S.D. Siamantziouras, A.C. Terry, A.Y. Troumbis, and J.H. Lawton. 2001. Local adaptation enhances performance of common plant species. 2001. *Ecology Letters* 4: 1-9.

- 14) Hector, A. and the BIODDEPTH Project (Schmid, B., Beierkuhnlein, C., Caldeira, M.C., Diemer, M., Dimitrakopoulos, P.G., Finn, J., Freitas, H., Giller, P.S., Good, J., Harris, R., Högberg, P., Huss-Danell, K., Joshi, J., Jumpponen, A., Körner, C., Leadley, P.W., Loreau, M., Minns, A., **Mulder**, C.P.H., O'Donovan, G., Otway, S.J., Pereira, J.S., Prinz, A., Read, D.J., Scherer-Lorenzen, M., Schulze, E.-D., Siamantziouras, A.-S.D., Spehn, E.M., Terry, A.C., Troumbis, A.Y., Woodward, F.I., Yachi, S. & Lawton, J.H). 2001. Biodiversity and the functioning of grassland ecosystems: Multisite comparisons. Pp. 71-95 in: Functional Consequences of Biodiversity: Experimental Progress and Theoretical Extensions (eds. A. Kinzig, D. Tilman, & S. Pacala). Princeton University Press, Princeton.
- 13) **Mulder**, C.P.H., D.D. Uliassi, and D.F. Doak. 2001. Physical stress and diversity-productivity relationships: the role of positive interactions. *Proceedings of the National Academy of Sciences* 98: 6704-6708.
- 12) **Mulder**, C.P.H., and R.W. Ruess. 2001. Long-term effects of changes in goose grazing intensity on arrowgrass populations: a spatially explicit model. *Journal of Ecology* 89: 406-417.
- 11) **Mulder**, C.P.H. and S.N. Keall. 2001. Burrowing seabirds and reptiles: impacts on seeds, seedlings and soils in an island forest in New Zealand. *Oecologia* 127: 350-360.
- 10) Hector, A., Schmid, B., Beierkuhnlein, C., Caldeira, M.C., Diemer, M., Dimitrakopoulos, P.G., Finn, J., Freitas, H., Giller, P.S., Good, J., Harris, R., Högberg, P., Huss-Danell, K., Joshi, J., Jumpponen, A., Körner, C., Leadley, P.W., Loreau, M., Minns, A., **Mulder**, C.P.H., O'Donovan, G., Otway, S.J., Pereira, J.S., Prinz, A., Read, D.J., Scherer-Lorenzen, M., Schulze, E.-D., Siamantziouras, A.-S.D., Spehn, E.M., Terry, A.C., Troumbis, A.Y., Woodward, F.I., Yachi, S. & Lawton, J.H. (2000) No consistent effect of plant diversity on productivity - Response. *Science* 289: 1255a.
- 9) Koricheva, J., C.P.H. **Mulder**, B. Schmid, J. Joshi and K. Huss-Danell. 2000. Numerical responses of different trophic groups of invertebrates to manipulations of plant diversity in grasslands. *Oecologia* 125:271-282.
- 8) Hector, A., B. Schmid, C. Beierkuhnlein, M.C. Caldeira, M. Diemer, P.G. Dimitrakopoulos, J. Finn, H. Freitas, P.S. Giller, J. Good, R. Harris, P. Högberg, K. Huss-Danell, J. Joshi, A. Jumpponen, C. Körner, P.W. Leadley, M. Loreau, A. Minns, C.P.H. **Mulder**, G. O'Donovan, S.J. Otway, J.S. Pereira, A. Prinz, D.J. Read, M. Scherer-Lorenzen, E.-D. Schulze, A.-S.D. Siamantziouras, E. Spehn, A.C. Terry, A.Y. Troumbis, F.I. Woodward, S. Yachi, J.H. Lawton. 1999. Plant diversity and productivity in European grasslands. *Science* 286: 1123-1127.
- 7) **Mulder**, C.P.H. 1999. Vertebrate herbivores and plants in the Arctic and subarctic: effects on individuals, communities and ecosystems. *Perspectives in Plant Ecology, Evolution and Systematics* 2: 29-55.
- 6) **Mulder**, C.P.H., J. Koricheva, K. Huss-Danell, P. Högberg, and J. Joshi. 1999. Insects affect relationships between plant species richness and ecosystem processes. *Ecology Letters* 2: 237-246.
- 5) **Mulder**, C.P.H., and R.W. Ruess. 1998. Relationships between size, biomass allocation, reproduction and survival in *Triglochin palustris*: implications for the effects of goose herbivory. *Canadian Journal of Botany* 76:2164-2176

- 4) **Mulder**, C.P.H., and R.W. Ruess. 1998. Effects of herbivory on arrowgrass: interactions between geese, neighboring plants, and abiotic factors. *Ecological Monographs* 68(2): 275-293.
- 3) Ruess, R.W., D.D. Uliassi, C.P.H. **Mulder**, and B.T. Person. 1997. Growth responses of *Carex ramenskii* to variations in grazing, salinity and nitrogen availability: Implications for geese ecosystem dynamics in western Alaska. *EcoScience* 4: 170-178.
- 2) **Mulder**, C.P.H, R.W. Ruess, and J.S. Sedinger. 1996. Effects of environmental manipulations on *Triglochin palustris*: implications for the role of goose herbivory in controlling its distribution. *Journal of Ecology* 84: 267-278.
- 1) **Mulder**, C.P.H., and R. Harmsen. 1995. The effect of muskox herbivory on growth and reproduction in an arctic legume. *Arctic and Alpine Research* 27: 44-53.

#### **Other publications:**

- Hueffer, K., P. Armbruster, C. Daehler, M. Ferzli, J. Godwin, C. Mulder, and A. Sherwood. Species Interaction, Advantageous or Not; the Fig-Wasp Relationship. EcoEd Digital Library (Ecological Society of America). <http://esa.org/ecosed/index.php?P=FullRecord&ID=318>. Description and outcomes of an instructional exercise in ecology used at several universities.

#### **Teaching experience:**

##### Lower-division undergraduate:

- *Fundamentals of Biology I* (Biol. 105) and II (Biol. 116), with D. Kind: lectures and labs (65-180 students). Fall 2007 and Spring 2010, 2012, UAF.
- *Introduction to Plant Biology* (Biol 239): lectures and labs (25-38 students). Spring 2001 and Fall 2001, 2002, 2003, 2005, 2007, 2009, UAF.
- *Biological and Physical Principles in Ecology* (Biol. 214, with J. Shulmeister): lectures and labs (80-90 students). 1998 – 2000, VUW.
- *Field Ecology and Landscape Evolution* (Biol. 242, with J. Shulmeister), an 8-day intensive field course for second year undergraduates (80 - 90 students). 1998- 2000, VUW.
- *Principles of Ecology* (Biol. 271), lectures (55 students). Spring 1996, UAF.

##### Upper-division undergraduate:

- *Community Ecology* (Biol. 472), lectures and discussions (6 -35 students). Fall 2002, 2003,2004, 2005, 2006, 2008, UAF.
- *Readings in Community Ecology*, (discussion group leader, 3 graduate students). Spring 2002, UAF.
- *Plant Ecology* (Biol. 417, with D. Drake), a fourth-year seminar course (7-8 students). 1998- 2000, VUW.
- *Plant Ecology* (Biol. 317, with D. Drake), lectures, laboratory exercises, and a field trip (30-50 students). 1998 – 2000, VUW.
- *Conservation Ecology* (Biol. 321, with B. Bell, coordinator, and J. Gardner), lectures, laboratory exercises, and a field trip (50-60 students). 1998-2000, VUW.

##### Graduate level:

- *Scientific Writing, Editing, and Revising* (Biol. 693-3 / Biol 604): lectures and discussions. Spring 2009 (9 students), Spring 2011 (13 students, co-taught with L. Conner), UAF.
- *Community Structure and Ecosystem Function* (Biol. 694-3). Lectures and discussions (7 students). Spring 2007, UAF.

- *Scientific Teaching* (Biol 693, co-taught with R. Boone, L. Conner, S. Fowell, A. Kade, and D. Kind.): lectures and discussion (20 students), Spring 2010, UAF.

Other university teaching experience:

- Two 2-hour workshops on Scientific Teaching and Active Learning to approx. 40 faculty members and graduate students, March / April 2009, UAF.
- Guest lecturer in courses at the 100 through 400 level, including *Plant Ecology*, *Plant Population Biology*, *Physiological Plant Ecology*, *Botany*, *Biological Principles*, *Microbial Ecology* and *Flora of Alaska* at UAF, and *Conservation Management* at VUW.
- Teaching assistant for seven different undergraduate biology courses at Bates College, Queen's University, and UAF, 1988-1995.

Educational outreach:

- Instructor in ED F595-F05: *Invasive Plants of Alaska*, summer 2011. This course was aimed at rural teachers and educators.
- Coordinator (with K. Spellman) of the Melibee Citizen Science project. This project involves citizen scientists in collecting phenological data on native berry-producing plants and an invasive plant.
- Coordinator for the Culturally Responsive Biological Science Education Project of EPSCoR at UAF. This involved designing, coordinating, and participating in a course entitled *Alaskan Biogeography: Plants and their Symbionts* for rural secondary school teachers (June-July 2009 and June 2010).
- Lecturer, Continuing Forestry Education Short Course on Introduced and Invasive Species in Resource Management, December 2003.

**Student supervision:**

Graduate committee chair (current): for M. Durrett (PhD) and K. Spellman (PhD). Graduate committee chair (completed) for J. Rohrs-Richey (MS 2004, PhD 2011), J. Reese (MS 2006; a high school science teacher), K. Villano (MS 2008, now a PhD student), M.N. Grant-Hoffman (PhD 2009; ecologist at the Bureau of Land Management).

Graduate committee member (current) for, K. Christie (PhD), M. Garoutte (MS), I. Herriott (MS), A. Thurber (MS), I. Timling (PhD), L. Schneller (MS at UA Anchorage). Graduate committee member (completed) for M. Anderson (PhD), A. Angell (MS), E. Bernhardt (MS), K. Calhoun (MS), A. Kade (Ph.D), A. Klaas (MS), B. Lake (MS), D. Safine (MS), and S. Wipf (PhD, U. of Zuerich).

Advisor for undergraduate research project for M. Huntsiger (2011), L. Ponchione (2009), K. Mohrmann (2007), A. Eddins (2006), E. Glenn (2004) and C. McGee (2002).

Victoria University of Wellington: supervisor for S. Mahat. (M. Con. Sci. 2000), D. Hodson (B.Sc. Hon. 1999), K. Stokes, (B.Sc. Hon 1999).

**Professional Development:**

- Summer Institute in Undergraduate Biology Education (sponsored by the National Academies of Science and the Howard Hughes Medical Institute), June 2008, Madison, WI, USA.
- Academic Leadership Institute, UAF, October 2008- April 2009.

**Professional service:**

- Principal Coordinator, SEAPRE (Seabird Islands and Introduced Predators) Research Coordination Network ([www.seapre.uaf.edu](http://www.seapre.uaf.edu)). This network brings together approx. 50 researchers from all over the world who work on seabird island ecology. I organized three annual



meetings (2007, 2008, 2009) and was the co-coordinator for an symposium on seabird island restoration at the World Seabird Conference in Victoria, BC, Canada (September 2010)

- Member, National Science Foundation panels, 2002, 2003, 2004, 2006, 2008, 2009.
- Associate Editor, *Journal of Plant Ecology*, April 2010-present
- Member, Advisory Group on Science and Monitoring relating to the South Georgia reindeer eradication (April 2011-present)
- Co-organizer for “Ecology of Insular Biotas” conference held in Wellington, New Zealand in February 2001. This conference attracted 170 participants from 20 countries.
- Guest editor, special issue of *Journal of Biogeography* on Ecology of Insular Biotas, 2001-02.
- Reviewer for *Acta Oecologica*, *American Naturalist*, *Arctic*, *Arctic Antarctic and Alpine Research*, *Basic and Applied Ecology*, *Biological Invasions*, *Canadian Journal of Botany*, *Ecology*, *Ecology Letters*, *Frontiers in Ecology*, *Functional Ecology*, *Journal of Ecology*, *Journal of Biogeography*, *Journal of Vegetation Science*, *Global Change Biology*, *New Zealand Journal of Ecology*, *Oecologia*, *Oikos*, *Plant and Soil*, *Plant Ecology*, and *Wetlands*
- *Ad-hoc* reviewer of grants applications / reports for National Science Foundation, National Geographic, US Forest Service, Murdoch Charitable Trust (US) , Ecological Society of America, NWO (Netherlands), Bicentennial Program for Science and Technology (Chile), German Research Foundation, and Swiss Science Foundation.

#### **University service:**

- Chair, Department of Biology and Wildlife, July 2010 – present.
- Committee membership at UAF (campus-wide):
  - Life Sciences Building User Committee, July 2010-present
  - Indirect Cost Recovery Committee, November 2010-February 2011
  - Search committee for Dean of the Graduate School , fall 2010)
  - Faculty Appeals and Oversight Committee, fall 2009 – spring 2010
  - Program Review Committee for the Department of Biology and Wildlife and lead author of the departmental report submitted to the committee.
  - Chair (2003-2004), co-chair (2004-2005) and member (2002-2003) of the Graduate Academic & Advisory Committee of the Faculty Senate.
  - Alternate member of the College of Science and Engineering Faculty Senate, 2002-2003
- Committees membership in the Department of Biology and Wildlife or Institute of Arctic Biology, UAF (in addition to Chair and Assistant Chair of the Department):
  - Chair (2006-2009) and member (2005-2006) of the teaching advisory committee (TAC).
  - Chair, *ad hoc* committee on the “botany” curriculum, 2005-2006.
  - Member of the MS comprehensive exam committee, UAF, Spring 2001- 2003
  - Member of the research advisory committee (Spring 2006- Spring 2008).
  - Member of the following search committees at UAF: Assist. Prof. in. Plant Molecular Systematics, Executive Officer, Institute of Arctic Biology (2001), Assist. Prof. Wildlife Ecology, (2001-2002), B&W office manager (2009), IAB greenhouse manager (2008), Unit Leader, USGS Cooperative Unit (2010).
- Faculty advisor for the UAF chapter of Beta Beta Beta, the Biological Honors Society, 2001-2005
- Coordinator for the seminar series in Ecology and Evolution, Victoria University of Wellington, 1999 and 2000.
- Coordinator, Faculty - Graduate seminar series, Dept of Biology and Wildlife, UAF, 1992-93.

**Language Skills:** Dutch and Spanish.