

C u r r i c u l u m V i t a e

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Date of birth: 1968

Academic degrees

Cand. Mag., Biology, March 1993. University of Trondheim, Faculty of Arts and Sciences / Norwegian Institute of Technology. Studies in biology, mathematics, and physics.

Cand. Scient., Zoology, August 1994. University of Trondheim, Faculty of Arts and Sciences, Dept. of Zoology. Studies in terrestrial ecology. Title of thesis: '*Female Roe Deer Home Range Size Variation and Estimation.*'

Dr. Scient., Zoology, November 1997. Norwegian University of Science and Technology (NTNU). Supervisors: Senior Research Scientist Kjetil Hindar (Dr.Philos.) at the Norwegian Institute for Nature Research in Trondheim, and Professor Steinar Engen (Ph.D.) at Dept. of Mathematical Sciences, NTNU, Trondheim. Title of thesis: '*Gene Flow and Genetic Drift in Geographically Structured Populations: Ecological, Population Genetic, and Statistical Models.*'

Awards

The Royal Norwegian Society of Sciences and Letters' young scientist award 2002.

Professional experience

1994 - 1997. Scholar at the Norwegian Institute for Nature Research (NINA) on the project 'Gene flow from genetically modified organisms to wild relatives' funded by the Norwegian Research Council's programme 'Environmental effects of biotechnology'.

1997 - 1998. Civilian service for conscientious objectors at Department of Mathematical Sciences, NTNU.

1999 - 2000: Postdoctoral fellow at Institute of Cell, Animal, & Population Biology, University of Edinburgh / Department of Mathematical Sciences, NTNU funded by the Norwegian Research Council's programme 'Biological Diversity — Dynamics, Threats and Management'.

2001 - 2002: Research Scientist at Department of Mathematical Sciences, NTNU funded by the EU-project METABIRD

2003 - 2009 : Associate Professor of Statistics at Dept. of Mathematical Sciences, NTNU.

2009 - present : Professor of Statistics at Dept. of Mathematical Sciences, NTNU.

Supervised Master students, PhD students and Postdocs

1. Azamed Yehuala Gezahagne: Effective Size and Loss of Heterozygosity in Subdivided Populations (Internation Master in Mathematics, NTNU, 2004)
2. Marit Linnerud: Factors affecting fertility in woman in a population in Nord-Trøndelag (Master in biology, NTNU, 2008) (co-supervisor)
3. Anna Marie Coland: Can genetic drift explain geographic differentiation in morphological characters in house sparrows? (Master in Biology, NTNU, 2008) (co-supervisor)
4. Ingelin Steinsland: Markov Chain Monte Carlo metodar i kvantitativ genetikk. Postdoc in statistics 2005-2006.
5. Thomas Kristiansen: Analysis of Dominance Hierarchies Using Generalized Mixed Models (Master in Industrial Mathematics)
6. Jisca Huisman: Modelling the effects of escaped farmed salmon on genetics and fitness of wild populations (PhD in Biology, ongoing)

Grants

1. 1999-2001: Effects of one-way migration and stabilizing selection on polygenic traits. 1056 000 NOK. The Norwegian research councils, programme "Biologisk mangfold" (Project leader).
2. 2003-2006: Quantifying biological risks of growth-enhanced transgenic salmon. 7794 000 NOK. The Norwegian Research Council (Co-applicant).
3. 2006-2008: Storforsk: Fra gener til samfunn (2006-2008). The Norwegian Research Council (18 000 000 NOK (Co-applicant).
4. 2008-2009: Svartelisteprojekt: The Norwegian Biodiversity Information Centre, 1200 000 NOK (Co-applicant).
5. 2008-2011: Quantitative and population genetic models for the effect of escaped farmed salmon on genetic variation and fitness in wild populations. 3765 000 NOK, The Norwegian research council, programme "Miljø 2015" (Project leader).

Refereeing for

American Naturalist, Animal Behaviour, Behavioral Ecology, Behavioral Ecology and Sociobiology, Conservation Genetics, Ecology, Ecology Letters, Evolution, Evolutionary Ecology, Genetical Research, Journal of Clinical Epidemiology, Journal of Theoretical Biology, Journal of Zoology, Proceedings of the Royal Society London Series B, Theoretical and Applied Genetics, Wildlife Biology.

Publications in peer reviewed journals

1. **Tufto, J.**, R. Andersen, & J. Linnell, 1996. Habitat use and ecological correlates of home range size in a small cervid: the roe deer. *Journal of Animal Ecology* **65**:715–724.
2. **Tufto, J.**, S. Engen, & K. Hindar, 1996. Inferring Patterns of Migration from Gene Frequencies under Equilibrium Conditions. *Genetics* **144**:1911–1921.
3. **Tufto, J.**, S. Engen, & K. Hindar, 1997. Stochastic Dispersal Processes in Plant Populations. *Theoretical Population Biology* **52**:16–26.
4. Landa, A., S. Krogstad, B. Å. Tømmerås, & **J. Tufto**, 1998. Do Volatile Repellents Reduce Wolverine *Gulo Gulo* Predation on Sheep? Results from a Large-Scale Experiment. *Wildlife Biology* **4**:111–118.
5. Landa, A., **J. Tufto**, R. Franzén, T. Bø, M. Linden, & J. E. Swenson, 1998. Active Wolverine Dens as a Minimum Population Estimator in Scandinavia. *Wildlife Biology* **4**:159–168.
6. Nurminiemi, M., **J. Tufto**, N. Nilsson, & O. Rognli, 1998. Spatial models of pollen dispersal in the forage grass meadow fescue. *Evolutionary Ecology* **12**:487–502.
7. **Tufto, J.**, A. F. Raybould, K. Hindar, & S. Engen, 1998. Analysis of Genetic Structure and Dispersal Patterns in a Population of Sea Beet. *Genetics* **149**:1975–1985.
8. **Tufto, J.**, E. Solberg, & T. Ringsby, 1998. Statistical models of transitive and intransitive dominance structures. *Animal behaviour* **55**:1489–1498.
9. **Tufto, J.**, B. E. Sæther, S. Engen, J. E. Swenson, & F. Sandegren, 1999. Harvesting strategies for conserving minimum viable populations based on World Conservation Union criteria: brown bears in Norway. *Proceedings of the Royal Society B* **266**:961–968.
10. Sæther, B. E., **J. Tufto**, S. Engen, K. Jerstad, O. W. Røstad, & J. E. Skåtán, 2000. Population dynamical consequences of climate change for a small temperate songbird. *Science* **287**:854–856.
11. **Tufto, J.**, 2000. Quantitative genetic models for the balance between migration and stabilizing selection. *Genetical Research* **76**:285–293.

12. **Tufto, J.**, 2000. The evolution of plasticity and nonplastic spatial and temporal adaptations in the presence of imperfect environmental cues. *American Naturalist* **156**:121–130.
13. **Tufto, J.**, B. E. Sæther, S. Engen, P. Arcese, K. Jerstad, O. W. Røstad, & J. N. M. Smith, 2000. Bayesian meta-analysis of demographic parameters in three small temperate passerines. *Oikos* **88**:273–281.
14. **Tufto, J.**, 2001. Effects of releasing maladapted Individuals: A demographic-evolutionary model. *American Naturalist* **158**.
15. Ringsby, T. H., B. E. Sæther, **J. Tufto**, H. Jensen, & E. J. Solberg, 2002. Asynchronous timing of breeding decrease spatial synchrony in demography in a metapopulation of House Sparrows (*Passer domesticus*). *Ecology* **83**:561–569.
16. Henriksen, S., R. Aanes, B. E. Sæther, T. H. Ringsby, & **J. Tufto**, 2003. Does availability of resources influence grazing strategies in female Svalbard reindeer? *Rangifer* **23**:25–37.
17. Jensen, H., B. E. Sæther, T. H. Ringsby, **J. Tufto**, S. C. Griffith, & H. Ellegren, 2003. Sexual variation in heritability and genetic correlations of morphological traits in house sparrow (*Passer domesticus*). *Journal of Evolutionary Biology* **16**:1296–1307.
18. Rolandsen, C. M., E. J. Solberg, **J. Tufto**, B. E. Sæther, & M. Heim, 2003. Factors affecting detectability of moose (*Alces alces*) during the hunting season in northern Norway. *Alces* **39**:79–88.
19. **Tufto, J.** & K. Hindar, 2003. Effective size in management and conservation of subdivided populations. *Journal of Theoretical Biology* **222**:273–281.
20. Hindar, K. & **J. Tufto**, 2004. Conservation of genetic variation in harvested salmon populations. *ICES Journal of Marine Sciences* **61**:1389–1397.
21. Jensen, H., B. E. Sæther, T. H. Ringsby, **J. Tufto**, S. C. Griffith, & H. Ellegren, 2004. Lifetime reproductive success in relation to morphology in the house sparrow (*Passer domesticus*). *Journal of Animal Ecology* **73**:599–611.
22. **Tufto, J.** & P. Cavallini, 2005. Should wildlife biologists use free software? *Wildlife Biology* **11**:67–76.
23. **Tufto, J.**, T. H. Ringsby, F. Adriaensen, A. Dhondt, & E. Matthysen, 2005. A parametric model for estimation of dispersal patterns in five passerine metapopulations. *American Naturalist* **165**:E13–E26.
24. Brøseth, H., **J. Tufto**, H. C. Pedersen, H. Steen, & L. Kastdalen, 2006. Dispersal patterns in harvested willow ptarmigan populations. *Journal of Applied Ecology* **42**:453–459.

25. Skjelseth, S., T. H. Ringsby, H. Jensen, **J. Tufto**, & B. E. Sæther, 2006. Dispersal patterns within a meta-population of House Sparrows after an introduction experiment. *Journal of Ornithology* **147**:252–253.
26. de Eyto, E., P. McGinnity, S. Consuegra, J. Coughlan, **J. Tufto**, K. Farrell, H.-J. Megens, W. Jordan, T. Cross, & R. J. Stet, March 2007. Natural selection acts on Atlantic salmon major histocompatibility (MH) variability in the wild. *Proceedings of the Royal Society B: Biological Sciences* **274**:861–869.
27. Skjelseth, S., T. H. Ringsby, **J. Tufto**, & B. E. Sæther, 2007. Dispersal of introduced house sparrows (*Passer domesticus*): An experiment. *Proceedings of the Royal Society B* **247**:1763–1771.
28. Tufto, I., R. Hansen, D. Byberg, K. H. H. Nygaard, **J. Tufto**, & De, 2007. The effect of collagenase and hyaluronidase on transient perfusion in human osteosarcoma xenografts grown orthotopically and in dorsal skinfold chambers. *Anticancer Research* **27**:1475–1482.
29. Garel, M., E. J. Solberg, B. Sæther, V. Grøtan, **J. Tufto**, & M. Heim, January 2009. Age, Size, and Spatiotemporal Variation in Ovulation Patterns of a Seasonal Breeder, the Norwegian Moose (*Alces alces*). *American Naturalist* **173**:89–104.
30. Kuparinen, A., **J. Tufto**, S. Consuegra, K. Hindar, J. Merilä, & C. de Leaniz, 2009. Effective size of an Atlantic salmon (*Salmo salar L.*) metapopulation in Northern Spain. *Conservation Genetics* **11**:1559–1565.
31. **Tufto, J.**, 2010. Gene flow from domesticated species to wild relatives: Migration load in a model of multivariate selection. *Evolution* **64**:180–192.
32. de Eyto, E., P. McGinnity, J. Huisman, J. Coughlan, S. Consuegra, K. Farrell, C. O’Toole, **J. Tufto**, H.-J. Megens, W. Jordan, T. Cross, & R. J. M. Stet, 2011. Varying disease-mediated selection at different life-history stages of Atlantic salmon in fresh water. *Evolutionary Applications* .
33. Holand, A. M., H. Jensen, **J. Tufto**, & R. Moe, 2011. Does selection or genetic drift explain geographic differentiation of morphological characters in house sparrows *Passer domesticus*? *Genetics Research* **93**:367–379.
34. **Tufto, J.**, 2011. Overexploitation of a dispersing renewable resource controlled locally by sole owners: A game theoretic analysis In prep.
35. Huisman, J. & **J. Tufto**, 2012. Comparison of non-Gaussian quantitative genetic models for migration and stabilizing selection. *Evolution*, in press.
36. **Tufto, J.**, R. Lande, T.-H. Ringsby, S. Engen, B.-E. Sæther, T. R. Walla, & P. J. DeVries, 2012. Estimating Brownian motion dispersal rate, longevity and population

density from spatially explicit mark-recapture data on tropical butterflies. *Journal of Animal Ecology* .

Reports and book chapters

37. Tømmerås, B. Å., Ø. Johnsen, T. Skrøppa, K. Hindar, J. Holten, & **J. Tufto**, 1996. Long-Term Environmental Impacts of Release of Transgenic Norway Spruce (*Picea abies*). NINA/NIKU Project Report 003. Technical report, Norwegian Institute for Nature Research, Trondheim, Norway.
38. Rognli, O. A., J. Tomiuk, **J. Tufto**, M. Nurminiemi, & R. B. Jørgensen, 1999. Gene flow from transgenic crop plants to wild populations. Technical report, Nordtest, Espoo, Finland.
39. **Tufto, J.**, 1999. The Wave of Advance of Introduced Genes in Population of Plants. In K. Ammann, Y. Jacot, G. Kjellson, & V. Simonsen, editors, *Risks and Prospects of Transgenic Plants*, pages 47–52. Birkhauser.
40. Hindar, K., L. M. Sættem, & **J. Tufto**, 2001. Gyrodactulus salaris og genressurser hos laks: effekt av ulike forvaltningstiltak. In Alf, editor, *Gyrodactylus salaris - kveletak på laksen? Villaksseminaret 2001*. Direktoratet for Naturforvaltning, Trondheim. 2002.
41. Hindar, K., G. C. de Leániz, M. L. Koljonen, **J. Tufto**, & A. F. Youngson, 2006. Fisheries Exploitation. In E. Verspoor, L. Stradmeyer, & J. Nielsen, editors, *The Atlantic Salmon: Genetics, Conservation and Management*, pages 299–324. Blackwell.
42. Sæther, B.-E., T. Holmern, **J. Tufto**, & S. Engen, 2010. Forslag til et kvantitativt klassifiseringssystem for risikovurderinger av fremmede arter. Technical report, Norges teknisk-naturvitenskapelige universitet, Senter for bevaringsbiologi, Trondheim.

Miscellaneous

43. Hindar, K. & **J. Tufto**, 1995. Dispersal and gene flow in migratory fish populations.
44. **Tufto, J.**, 1998. Modeller for genetisk struktur og genstrøm i geografisk oppdelte populasjoner.
45. Rognli, O. A., M. Nurminiemi, N. O. Nilsson, & **J. Tufto**, 1999. Pollen dispersal and gene flow in grasses — A model study related to the risk of gene flow from the use of transgenic grasses.
46. **Tufto, J.**, 2003. Nytt studieprogram i biomatematikk ved NTNU.