

Curriculum Vitae of Eva Fuglei, PhD

Born: 30.03.1962 in Oslo, Norway
Citizenship: Norwegian
Profession: Biologist
Qualification: PhD
Address: -home Håkøyveien 570, Gammelgård, NO-9100 Kvaløysletta, Norway
-work Norwegian Polar Institute (NPI)
NO-9296 Tromsø, Norway
Phone: +47 77750528
Telefax: +47 77750501
E-mail: eva.fuglei@npolar.no

Education:

- 1988: B.Sc., Norwegian University of Sport and Physical Education, Oslo, Norway (physiology, anatomy, biochemistry, general biology).
- 1991: M.Sc., University of Oslo, Norway, in physiology.
- 2000: PhD, University of Oslo, Norway, in eco-physiology. "Physiological adaptations of the arctic fox to high Arctic conditions".

Positions

- 1991-1993: NPI, Oslo, Norway. Biologist, Environmental Manager.
- 1993-1994: NPI, Longyearbyen, Svalbard, Norway. Deputy biologist.
- 1994: NPI, Longyearbyen, Svalbard, Norway. Deputy Director of the Svalbard Office.
- 1994-1997: NPI, Longyearbyen-Ny-Ålesund, Svalbard, Norway. Biologist, PhD research scholar.
- 1997-present: NPI, Tromsø, Norway. Researcher.

Research Projects:

- 1990-ongoing: Arctic fox den monitoring program and population dynamic in Svalbard.
- 1993-1997: Ecophysiological research on arctic foxes in Svalbard. Including energetic studies, blood samples, radio- and satellite telemetry.
- 2000-ongoing: Population monitoring of Svalbard Rock Ptarmigan (*Lagopus muta hyperborea*): point count survey of territorial cocks in spring.
- 2001-ongoing: Genetic structure of the arctic fox population in the Arctic and in Svalbard.
- 2002-2006: The role of climatic variation in the dynamics and persistence of an Arctic predator-prey/host-parasite system in Svalbard. Financed by the Research Council of Norway (NFR).
- 2002-ongoing: Energy cost of parental care in free-ranging arctic foxes on Iceland. Including field metabolic rate, double-labelled water, blood samples, GPS telemetry.
- 2002-ongoing: Monitoring rabies, parasites and infectious diseases or agents in the arctic fox population in Svalbard.

- 2003-2005: Bioavailability and effects of organochlorine contaminants in relation to seasonal lipid cycles in arctic fox. Fieldwork in Svalbard, and samples are collected from Svalbard, Greenland and Russian Arctic. Financed by NFR.
- 2007-2010: Arctic predators as Indicators of Tundra Ecosystem State. A Norwegian IPY project. Financed by NFR.

Teaching:

- 1995-1996: University Studies in Svalbard (UNIS). Arctic biology, eco-physiological adaptations in arctic foxes in Svalbard.
- 2001-2004: UNIS, AB-201, Predators in the Arctic.

Students:

- Co-supervisor for: Ingeborg Gammelsæter Hallanger, NTNU (in cooperation with Prof. Bjørn Munro Jenssen). Master thesis in Physiology: *Vitamin and Hormone status in PCB exposed juvenile male Alopex lagopus*. Exam December 2005, Trondheim, Norway.
- Co-supervisor for: Elise Strømseng, University of Tromsø (in cooperation with Prof. Rolf Anker Ims). Master Thesis: *Environmental determinants of spatio-temporal variation in a scavenger guild on sub-arctic tundra*. Exam May 2007, Tromsø, Norway.
- Co-supervisor for: Siw Killengren, University of Tromsø (in cooperation with Prof. Rolf Anker Ims). PhD thesis: *Scavenger guild (red fox and arctic fox) on sub-arctic tundra*.

Administrative activities

- 2000-2003: Member of the course committee for “Svalbardkurset” - the Svalbard course. <http://www.svalbardkurset.no/>
- 2004-2006: Member of the reference committee for the establishment of Svalbard Museum. <http://www.svalbardmuseum.no/>
- 2006-ongoing: Norwegian member of the International Steering Committee for the Canadian IPY Arctic WOLVES project (www.cen.ulaval.ca/arcticwolves/)
- 2007-ongoing: National member of the Norwegian arctic fox committee.

Reviewer for:

- 2000: Physiology & Behavior.
- 2001, 2002, 2003: American Journal of Physiology.
- 2003: Comparative Biochemistry & Physiology.
- 2004: British Journal of Nutrition, NATO Advanced Research Workshop, Millennium Ecosystem Assessment, National Geographic.
- 2005: Ranger Rick Magazine, National Wildlife Federation.
- 2006: Experimental Biology and Medicine, Arctic, Polar Biology.
- 2007: Polar Biology.

Publications in peer reviewed journals:

1. Lønne I, **Fuglei E**. 1997. Carcass of a bowhead whale (*Balaena mysticetus*) found in the lateral moraine of the Jemelianovbreen glacier, eastern Svalbard. *Polar Research*, 16(1):9-18. 1997.
2. **Fuglei E**, Øritsland NA. 1999. Body composition, resting and exercise metabolic rates in rats during starvation. *Acta Physiologica Scandinavica* 165:203-210.
3. **Fuglei E**, Øritsland NA. 1999. Seasonal trends in body mass, food intake and resting metabolic rate, and induction of metabolic depression in arctic foxes (*Alopex lagopus*) at Svalbard. *Journal of Comparative Physiology B* 169: 361-369.
4. Pomponi M, Bertonati C, **Fuglei E**, Wiig Ø, Derocher A. E. 2000. 2,3-DPG-Hb complex: a hypothesis for an asymmetric binding. *Biophysical Chemistry* 84: 253-260.
5. **Fuglei E**, Aanestad M, Berg J. P. 2000. Hormones and metabolites of arctic foxes (*Alopex lagopus*) in response to seasonal variations, starvation and re-feeding. *Comparative Biochemistry and Physiology A* 126: 287-294.
6. Henttonen H, **Fuglei E**, Gower C, Haukialmi V, Ims RA, Niemimaa J Yoccoz NG, 2001. *Echinococcus multilocularis* on Svalbard: introduction of an intermediate host has enabled the local life cycle. *Parasitology* 123: 547-552.
7. **Fuglei E**, Mercer JB, Arnemo JM. 2002. Anesthesia and surgical implantation of radio transmitters in arctic foxes (*Alopex lagopus*) on Svalbard. *Journal of Zoo and Wildlife Medicine* 33(4): 342-349.
8. Ahlstrøm Ø, **Fuglei E**, Mydland LT. 2003. Comparative nutrient digestibility of arctic foxes (*Alopex lagopus*) on Svalbard and farmed-raised blue foxes (*Alopex lagopus*). *Comparative Biochemistry and Physiology A* 134(1): 63-68.
9. **Fuglei E**, Øritsland NA, Prestrud P. 2003. Local variation in arctic fox abundance on Svalbard, Norway. *Polar Biology* 26: 93-98.
10. **Fuglei E**, Øritsland NA. 2003. Energy cost of running in an arctic fox (*Alopex lagopus*). *The Canadian Field-Naturalist* 117(3): 430-435.
11. **Fuglei E**, Mustonen A-M, Nieminen P. 2004. Effects of season, food deprivation and re-feeding on leptin, ghrelin and growth hormone in arctic foxes (*Alopex lagopus*) on Svalbard, Norway. *Journal of Comparative Physiology B* 174: 157-162.
12. Dalèn L, **Fuglei E**, Hersteinsson P, Kapel C, Roth J, Samelius G, Tannerfeldt M, Angerbjørn A. 2005. Population history and genetic structure of a circumpolar species: the arctic fox. *Biological Journal of the Linnean Society* 84: 79-89.
13. Sørensen KK, Mørk T, Sigurdardóttir OG, Åsbakk K, Åkerstedt J, Bergsjø B, **Fuglei E**. 2005. Acute toxoplasmosis in three wild arctic foxes (*Alopex lagopus*) from Svalbard; one with co-infections of *Salmonella enteritidis* PT1 and *Yersinia pseudotuberculosis* serotype 2b. *Research in Veterinary Science* 78: 161-167.
14. Ims RA, **Fuglei E**. 2005. Trophic Interaction Cycles in Tundra Ecosystems and the Impact of Climate Change. *BioScience* 55(4): 311-322.
15. Våge DI, **Fuglei E**, Snipstad K, Beheim J, Landsem VM, Klungland H. 2005. Two cysteine substitutions in the MC1R generate the blue variant of the arctic fox (*Alopex lagopus*) and prevent expression of the white winter coat. *Peptides* 26: 1814-1817.
16. Fuglestad BN, Haga ØE, Folkow L, **Fuglei E**, Blix AS. 2006. Seasonal variation in basal metabolic rate, lower critical temperature and responses to temporary starvation in the arctic fox (*Alopex lagopus*) from Svalbard. *Polar Biology* 29: 308-319.

17. Pedersen ØÅ, Lier M, Routti H, Christiansen HH, **Fuglei E.** 2006. Co-feeding between Svalbard rock Ptarmigan (*Lagopus muta hyperborea*) and Svalbard reindeer (*Rangifer tarandus platyrhynchus*). Arctic 59(1): 61-64.
18. Dalén L, Kvaløy K, Linnell JDC, Elmhagen B, Strand O, Tannerfeldt M, Henttonen H, **Fuglei E**, Landa A, Angerbjörn A. 2006. Population structure in a critically endangered arctic fox population: does genetics matter? Molecular Ecology 15: 2809-2819.
19. **Fuglei E**, Bustnes JO, Hop H, Mørk T, Bjørnfoth H, van Bavel B. 2007. Environmental contaminants in arctic foxes (*Alopex lagopus*) in Svalbard: relationships with feeding ecology and body condition. Environmental Pollution 146(1): 139-149.
20. Gwynn JP, **Fuglei E**, Dowdall M. 2007. ¹³⁷Cs in Arctic Foxes (*Alopex lagopus*) on Svalbard. 2007. Journal of Environmental Radioactivity 92: 30-40.
21. Pedersen ÅØ, Jepsen JU, Yoccoz NG, **Fuglei E.** 2007. Ecological correlates of the distribution of territorial Svalbard rock ptarmigan (*Lagopus muta hyperborea*). Can. J. Zool. 85: 1-11.
22. Johnson N, Dicker A, Mork T, Marston DA, Fooks AR, Tryland M, **Fuglei E** and Müller T. 2007. Phylogenetic comparison of Rabies viruses from disease outbreaks on the Svalbard Islands. Vector-Borne and Zoonotic Diseases 7(3):457-460.
23. Carmichael, L.E., Krizan, J., Nagy, J.A., **Fuglei, E.**, Dumond, M., Johnson, D., Veitch, A., Berteaux, D. and Strobeck, C. 2007. Historical and ecological determinants of genetic structure in arctic canids. In press. Molecular Ecology.
24. Geffen, E., Waidyaratne, S., Dalén, L., Angerbjörn, A., Vila, C., Hersteinsson, P., **Fuglei, E.**, White, P. A., Goltsman, M., Wayne, R. K. 2007. Sea ice occurrence predicts genetic isolation in the arctic fox. In press. Molecular Ecology.

Articles in review:

1. **Fuglei E**, Stien A, Yoccoz NG, Ims RA, Eide NE, Prestrud P, Deplazes P, Oksanen A. Spatial distribution of *Echinococcus multilocularis* in arctic fox scats, Svalbard, Norway. Submitted to Emerging Infectious Diseases 30 April 2007.
2. Sonne C, Wolkers H, Leifsson PS, Jenssen BM, **Fuglei E**, Ahlstrøm Ø, Dietz R, Kirkegaard M, Muir DCG, Jørgensen E. Contaminant-induced changes in kidney and liver tissue from experimentally exposed arctic foxes (*Alopex lagopus*). Submitted May 2007.
3. Prestrud KW, Åsbakk K, **Fuglei E**, Mørk T, Stien A, Ropstad E, Tryland M, Gabrielsen GW, Lydersen K, Kovacs K, Loonen M, Sagerup K, Oksanen A. Serosurvey for *Toxoplasma gondii* in arctic fox and its source species of infection in the high Arctic of Svalbard. Submitted to the International Journal for Parasitology May 2007.

Reports and dissertation:

1. Fossan KJ, **Fuglei E.** 1992. Strukturtelling av Svalbardrein i Agardh-området, Øst-Spitsbergen. Report to Statoil. Norsk Polarinstitut, Oslo.
2. **Fuglei E**, Prestrud P, Vongraven D. 1998. A status report of Arctic foxes *Alpoex lagopus* at Svalbard. Norsk Polarinstitutt rapportserie 44, pp 24.
3. **Fuglei E.** 2000. Physiological adaptations of the arctic fox to high Arctic conditions. PhD dissertation, University of Oslo, Oslo, Norway.
4. Røskaft E, Stubsjøen T, Bjørndal A, **Fuglei E**, Arlov T-B. 2000. Svalbardkurset 2000 – Evalueringsrapport, pp. 21.

5. Jenssen BM, Bremdal S, Overrein Ø, **Fuglei E**, Flå H, Brandvik PJ, Arlov T-B. 2001. Svalbardkurset 2001 – Evalueringsrapport. Pp. 24.
6. Jenssen BM, Bremdal S, Vongraven D, **Fuglei E**, Flå H, Brandvik PJ, Arlov T-B, Reymert PK. 2002. Svalbardkurset 2002 – Evalueringsrapport. 19.
7. Mørk T, **Fuglei E**. 2003. Polarrev fra Svalbard – rabiesdiagnostikk, kartlegging av aktuelle infeksjøs agens, miljøgifter, populasjonsstudier og genetiske undersøkelser. Report to Justisdepartementet, Landbruksdepartementet, Miljøverndepartementet og Sysselmannen på Svalbard. Pp. 12.
8. Jenssen BM, Bremdal S, Sander G, **Fuglei E**, Flå H, Humlum O, Arlov T-B. 2003. Svalbardkurset 2003 – Evalueringsrapport. Pp. 20.
9. Mørk T, **Fuglei E**. 2004. Sluttrapport for prosjektet: Polarrev fra Svalbard – rabiesdiagnostikk, kartlegging av aktuelle infeksjøs agens, miljøgifter, populasjonsstudier og genetiske undersøkelser. (Arctic fox on Svalbard – rabies, infectious diseases and agents, ecotoxicology and genetic studies.) Report to Justisdepartementet, Landbruksdepartementet, Miljøverndepartementet og Sysselmannen på Svalbard. Pp. 8.
10. Pedersen ÅØ, **Fuglei E**. 2005. Svalbardrype 2004. Registrering av territoriell stegg om våren. Aldersbestemming av rypevinger. Minirapport, Norsk Polarinstitut.
11. Pedersen ÅØ, Overrein Ø, Unander S, **Fuglei E**. 2005. Svalbard rock ptarmigan (*Lagopus mutus hyperboreus*): a status report. Rapportserie no. 125, Norwegian Polar Institute. Pp. 20.
12. Gwynn JP, Andersen M, **Fuglei E**, Lind B, Dowdall M, Lydersen C, Kovacs KM. 2005. Radionuclides in Marine and Terrestrial Mammals of Svalbard. StrålevernRapport, No 7. Pp. 54.
13. Pedersen ÅØ, **Fuglei E**. 2006. Overvåking av Svalbardrype 2005. Vårregistrering av territoriell stegg, aldersbestemming av rypevinger og jaktstatistikk. Feltrapport, Norsk Polarinstitut, Pp. 13.
14. Pedersen ÅØ, **Fuglei E**. 2007. Overvåking av Svalbardrype 2006. Vårregistrering av territoriell stegg, aldersbestemming av rypevinger og jaktstatistikk. Feltrapport, Norsk Polarinstitut, Pp. 14.

Books/chapter in books:

1. **Fuglei E**, Mørkvad B. 1994. Svalbard og Jan Mayen. In Naturmiljøet i Tall - 1994, Statistisk sentralbyrå, Direktoratet for naturforvaltning og Statens forurensningstilsyn. Universitetsforlaget, Oslo.
2. Blom K, **Fuglei E**. 2003. Fjellreven. Children book, Cappelen, Oslo, Norway.
3. Blom K, **Fuglei E**. 2004. The arctic fox. Children book. Cappelen, Oslo, Norway.
4. **Fuglei E**. 2006. Arctic fox. In Encyclopedia of the Arctic. Mark Nuttall, Ed., Routledge, Taylor & Francis Group, New York (Fitzroy Dearborn Publishers).
5. **Fuglei E**. Arctic fox. 2006. In: Birds and Mammals of Svalbard. Polarhåndbok No. 13, Norwegian Polar Institute. 77-80.
6. **Fuglei E**. Sibling vole. 2006. In: Birds and Mammals of Svalbard. Polarhåndbok No. 13, Norwegian Polar Institute. 81-83.
7. **Fuglei E**. Svalbard rock ptarmigan. 2006. In: Birds and Mammals of Svalbard. Polarhåndbok No. 13, Norwegian Polar Institute. 114-116.

8. **Fuglei E.** Fjellrev. 2006. In: Svalbards fugler og pattedyr. Polarhåndbok No. 13, Norwegian Polar Institute. 77-80.
9. **Fuglei E.** Østmarkmus. 2006. In: Svalbards fugler og pattedyr. Polarhåndbok No. 13, Norwegian Polar Institute. 81-83
10. **Fuglei E.** Svalbardrype. 2006. In: Svalbards fugler og pattedyr. Polarhåndbok No. 13, Norwegian Polar Institute. 114-116

Posters/Abstracts:

1. Lønne I, **Fuglei E.** 1998. Melting out of a bowhead whale from Jemelianovbreen at Svalbard. 23. Nordiske Geologiske Vintermøde, Århus, 13-16 januar 1998, abstract, p. 190.
2. Ahlstrøm Ø, **Fuglei E.** 1998. Endring i blårevens evne til å fordøye fôr. Sammenligning av viltfanget fjellrev fra Svalbard med dagens farmrev. Poster Husdyrforsk møtet 1998, Norges Landbrukshøgskole 10.-11. februar.
3. Ahlstrøm Ø, **Fuglei E.**, Mydland LT. 1998. Utvikling i blårevens evne til å fordøye næringsstoffer. Sammenligning av viltfanget fjellrev fra Svalbard med farmrev. NJF-seminar nr 295, 7.-9. September 1998, Bergen, Norge 4 s.
4. **Fuglei E.**, Øritsland NA. 2001. Energy cost of running in arctic fox (*Alopex lagopus*), on Svalbard, Norway. Presented at the first ever Canid Biology and Conversation Conference, Oxford, 17-21 September, 2001.
5. Sørensen KK, Mørk T, Sigurdardottir OG, Åsbakk K, Åkerstedt J, Bergsjø B, **Fuglei E.** 2003. Acute toxoplasmosis in wild arctic foxes at Svalbard. Presented at the Second International Workshop on Arctic Parasitology (IWAP2), Arctic Centre, Rovaniemi, Lapland, Finland September 1-3, 2003.
6. Yoccoz NG, **Fuglei E.**, Ims RA, Stien A, Winther J-G. 2004. The role of climatic variation in the dynamics and persistence of an Arctic predator- prey/host – parasite system”. Forskerkonferanse Lillehammer 7-8 januar, 2004.
7. Eide NE, Linnell J, Grøtan V, **Fuglei E.** 2004. Status for fjellreven globalt. (Status of the arctic fox in a global perspective). Presented at Nordic arctic fox seminar, Teveltunet Fjellstue, Meråker, Norway, November 15-16, 2004.
8. Stien A, **Fuglei E.**, Henttonen H, Ims RA, Oksanen A, Yoccoz NG. 2005. *Echinococcus multilocularis* in the sibling vole – arctic fox system on Svalbard. Presented at The 1st Symposium of the Scandinavian-Baltic Society for Parasitology, Vilnius, Lithuania: 26-29 May, 2005.
9. **Fuglei E.** 2005. Cold adaptation in the arctic fox (*Alopex lagopus*) 2005. Conservation of the arctic fox – Workshop, Stockholm, Sweden, 8 Dec. 2005.
10. Hallanger IG, Jenssen BM, Jørgensen E, **Fuglei E.**, Ahlstrøm Ø, Muir DCG. 2006. Effects of PCB on hormone status in juvenile farmed blue fox (*Alopex lagopus*). World Forum Convention Center in The Hague, the Netherlands. May 7-11, 2006. SETAC Europe Avenue de la Toison d'Or 67, B-1060 Brussels, Belgium.
11. Lifgren H., van Bavel, B., Lindström, G., **Fuglei E.**, Kapel, C.M.O. 2006. Level of PCBs, PBDEs & Pesticides in arctic fox (*Alopex lagopus*) from Greenland and northern Russia. Proceedings at the 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006, August 21 – 25, 2006, Oslo, Norway. Occurrence in the Arctic environment. Organohalogen Compounds Vol 68: 332-335.
12. Pedersen, ÅØ, Bårdsen, B-J, Yoccoz, NG, **Fuglei, E.** 2007. Evaluation of point transect sampling and occupancy models for abundance estimates of Svalbard rock ptarmigan

(*Lagopus muta hyperborea*) in Svalbard, Norway. Presented at the International Union of Game Biologists (Theme: Game abundance and bag statistic). XXVII Congress 13-18. August 2007, Uppsala, Sweden.

Popular writing:

1. **Fuglei E.** 1994. Svalbards naturmiljø. Særskilt vedlegg til St. Meld. Nr. 22 (1994-95) Om miljøvern på Svalbard. 32s.
2. **Fuglei E.** 1996. Spannende reveprosjekt i Ny-Ålesund, Svalbard (Exciting arctic fox project in Ny-Ålesund, Svalbard). Norwegian Polar Institute Annual Report 1995, pp. 12-13.
3. Lønne I, **Fuglei E.** 1997. "Pelskledd hval" smeltet fram fra isbre på Svalbard. Naturen nr. 2: 63-67.
4. Frafjord K, Rofstad G, **Fuglei E.** 1997. Døde fjellrev-valper på Svalbard av sykdom? Fauna 50(3): 108-113.
5. Ahlstrøm Ø, **Fuglei E.** 1998. Endring i blårevens evne til å fordøye fôr. Sammenligning av viltfanget polarrev fra Svalbard med dagens farmrev. Husdyrforsøksmøtet 1998, Norges Landbrukshøgskole 10.-11. februar, 607-609.
6. **Fuglei E**, Aarvik S, Mørk T. 2004. Rabies på Svalbard. Polarboken 2003-2004, 50-57.
7. **Fuglei E**, Pedersen ÅØ, Lier M. 2005. Svalbardrype (*Lagopus muta hyperborea*). Faktaark 014, Norwegian Polar Institute.
8. **Fuglei, E.**, Pedersen, Å.Ø. 2005. Svalbardrype (*Lagopus muta hyperborea*) – en jaktet art vi har lite økologisk kunnskap om. Fauna 58(4): 114-123.
9. **Fuglei E**, Goldman HV. 2006. Hanna Marie Resvoll-Holmsen: a pioneer in Svalbard. Polar Research 25(1): 1-13.
10. **Fuglei, E.**, Pedersen, Å.Ø. 2006. Fjellrypene på Svalbard: hvordan er de tilpasset, hvordan lever de og hva gjør forskerne? Svalbardposten nr. 35: 20-21.
11. **Fuglei, E.** 2006. Fjellreven – en arktisk globetrotter. Svalbardposten nr. 50: 21-23.
12. Stien A, **Fuglei E**, Ims RA, Yoccoz NG. 2007. Østmarkmusa og parasitten *Echinococcus multilocularis* på Svalbard, immigranter med høy temperaturtoleranse. Cicerone.