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## ANDREW EDWARD DEROCHER

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<b>Impact Measures (April 15, 2025)</b>	
Total Citations Google Scholar	20260
h-index Google Scholar	77
Total Citations Web of Science	12,022
h-index Web of Science	56
<b>Publications</b>	
Peer-reviewed Journal Articles	236
Other Publications	78
Books	1
<b>Funding</b>	
Research Grants (PI): past 15 years	>\$7,000,000
<b>HQP Supervision</b>	
PDF	6
Ph.D.	17
M.Sc.	34
B.Sc.	21

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### Honours and Distinctions

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2017-2022	Faculty of Science Research Fellowship
2018-2019	Killam Annual Professorship
2019	Faculty of Science Learning and Innovation Award for Teaching Excellence
2016	William Rowan Distinguished Service Award, Alberta Chapter of the Wildlife Society
2016	Faculty of Science Graduate Mentoring Award
2016-2017	Faculty of Science Students' Choice Honour Roll for your excellence in teaching
2012	Capilano University Distinguished Alumni Award
2012	National Faculty of Science Teaching Honor Roll
2012	National Outdoor Book Award, Honorable Mention for Polar Bears: A complete guide to their biology and behavior
2010	University of Alberta Alumni Honour Award

## Publications in Refereed Journals

*Names of supervised students and PDFs are underlined*

1. Harris RB, Belant JL, Swenson JE, Derocher AE. 2025. Ursus: A history of the journal. *Ursus* 36: article e2
2. Boyce MS, Derocher AE. 2025. Bear conservation, hunting, and politics in North America. *Journal of Wildlife Management*. In press.
3. Self JL, Togunov RR, Edwards MA, Derocher AE. 2025. Influence of wind on movement behaviour in Arctic grizzly bears. *Behavioural Processes* 225:105177
4. Naciri M, Aars J, Andersen M, Blanchet M-A, Derocher AE, Gamelon M. Wiig Ø, Cubaynes S. Offspring number, size, and survival: state-dependent optimization of litter size in a long-lived capital breeder. *Ecography*.
5. Jodouin C, Derocher AE, Lunn NJ, McGeachy D, Pilfold NW. 2025. Polar bears in western Hudson Bay show limited on-ice site fidelity. *Polar Biology* 48:48.
6. Edwards MA, Krawchuk K, Merrill E, Derocher AE. Assessing the influence of landscape factors and reproductive status on the movement ecology of a wide-ranging Arctic carnivore. *Ursus*.
7. Tremblay SS, McGeachy D, Lunn NJ, Richardson E, Derocher AE. 2025. Patterns and Temporal dynamics of canine breakage in western Hudson Bay polar bears (*Ursus maritimus*). *PLoS One* 20:e0319753
8. Thelin L, Richardson E, Stenson G, Hedlin E, Derocher AE. 2025. Space use of polar bears (*Ursus maritimus*) in Davis Strait in relation to sea ice and harp seals (*Pagophilus groenlandicus*). *Arctic Science* 11:1-20.
9. Biddlecombe B, Derocher AE, Krebs E, Lunn NJ McGeachy D, Richardson E. 2025. Building the foundation for polar bear science: Fifty years of research on polar bears in Western Hudson Bay. *Arctic Science*
10. Biddlecombe BA, Pilfold NW, Richardson E, Kutz S, Mavrot F, Schneider A, Derocher AE. 2025. Seroprevalence of *Erysipelothrix rhusiopathiae* in Beaufort Sea polar bears is linked to ringed seal demographics. *Journal of Wildlife Diseases* 61:76-87
11. Klappstein NJ, McGeachy DM, Lunn NJ, Pilfold NW, Derocher AE. 2024. Terrestrial site fidelity of maternal polar bears in western Hudson Bay. *Arctic Science* 10:688-697
12. Ross TR, Kirschhoffer BJ, Kirschhoffer J, York G, Derocher AE, Johnson AC, Lunn NJ, Trim V, McGeachy D, Northrup JM, Thiemann GW. Telemetry without collars: performance of fur- and ear-mounted satellite tags for evaluating the movement and behaviour of polar bears. *Animal Biotelemetry* 12:18
13. Littlefair C, Derocher AE, Frame P, Edwards MA, Frame DD, Slater OM, Smereka C. 2024. Chemical immobilization effects on cougar (*Felis concolor*) movement. *Journal of Wildlife Diseases* 60:985-990
14. McGeachy D, Lunn NJ, Derocher AE. 2025. Possible sexually selected infanticide by polar bears (*Ursus maritimus*) in western Hudson Bay. *Ursus* Accepted April 30, 2024.
15. Thompson PR, Bayne EM, Campbell M, Derocher AE, Edwards MA, Harringtons PD, Lele SR, Mallory CD, Lewis MA. 2024. A parametric model for estimating the timing and intensity of animal migration. *Movement Ecology* 12:1-18
16. Dunham KD, Dyck M, Derocher AE, Regehr EV, Stern H, Ware J, Koons DN. 2024. A demographic survey of the Davis Strait polar bear subpopulation using

- physical and genetic capture-recapture-recovery sampling. *Marine Mammal Science* 40:e13107.
17. McGeachy D, Lunn NJ, Richardson ES, Derocher AE. 2024. Sea ice influence on male polar bear survival in Hudson Bay. *Arctic Science* 10:493-498
  18. Tidière M, Conde DA, Staerk J, Adkensson M, Andersen DH, Bland L, Boye M, Brando S, Clegg I, Cubayne S, Cutting A, De Man D, Derocher AE, et al., Fernando Colchero. 2023. Survival improvements of marine mammals in zoological institutions mirror historical advances in human longevity. *Proceedings of the Royal Society: Biology* 290: 20231895
  19. Morehouse AT, Mallory M, Derocher AE, Edwards MA, Obbard M. 2024. Black bear cub rehabilitation across North America. *Ursus* 35:1-14
  20. Hamilton SG, Henderson EM, Derocher AE. 2023. Spatial and temporal harvest risk of polar bears in the Canadian Beaufort Sea. *Arctic Science* 9:856-868
  21. Miller EN, Trim V, Lunn NJ, McGeachy D, Derocher AE. 2023. Post-conflict movements of polar bears in western Hudson Bay, Canada. *Arctic Science* 9:796-806
  22. Togunov RR, Derocher AE, Lunn NJ, Auger-Méthé M. 2022. Drivers of polar bear behavior and the possible effects of prey availability on foraging strategy. *Movement Ecology* 10:50
  23. Rode KD, Taras BD, Stricker CA, Atwood TC, Boucher NP, Durner GM, Derocher AE, Richardson ES, Cherry SG, Quakenbush L, Horstmann L, & Bromaghin JF. 2022. Diet energy density estimated from stable isotopes in predator hair associated with survival, habitat use, and population dynamics. *Ecological Applications* 2022:e2751
  24. Miller EN, Lunn NJ, McGeachy D, Derocher AE. 2022. Autumn migration phenology of polar bears (*Ursus maritimus*) in Hudson Bay, Canada. *Polar Biology* 45:1023-1034
  25. Thompson PR, Lewis MA, Edwards MA, Derocher AE. 2022. Time-dependent memory and individual variation in Arctic brown bears (*Ursus arctos*). *Movement Ecology* 10:18
  26. Klappstein NJ, Potts JR, Michelot T, Börga L, Pilfold NW, Lewis MA, Derocher AE. 2022. Energy selection functions: modelling the energetic drivers of animal movement and habitat use. *Journal of Animal Ecology* 91:946-957
  27. Vongraven D, Derocher AE, Pilfold NW, Yoccoz NG. 2022. Polar bear harvest patterns across the circumpolar Arctic. *Frontiers in Conservation Science* 3:836544
  28. Dietz R.... Derocher AE, et al. 2022. A risk assessment review of mercury exposure in Arctic marine and terrestrial mammals. *Science of the Total Environment* 829:154445 doi.org/10.1016/j.scitotenv.2022.154445
  29. Smith T, Derocher AE, Mazur R, York G, Owen M, Obbard ME, Richardson ES, Amstrup SC. 2022. Anthropogenic food: An emerging threat to polar bear conservation. *Oryx* 57:1-10
  30. Maduna SN, Aars J, Fløystad I, Klütsch CFC, Zeyl Fiskebeck EML, Wiig Ø, Ehrich D, Andersen M, Bachmann L, Derocher AE, Nyman T, Eiken HG, Hagen SB. 2021. Sea-ice reduction drives genetic differentiation among Barents Sea polar bears. *Proceedings of the Royal Society B* 288:20211741 doi: 10.1098/rspb.2021.1741
  31. Thompson PR, Derocher AE, Edwards MA, Lewis MA. 2022. Detecting seasonal episodic-like spatio-temporal memory patterns using animal movement modelling. *Methods in Ecology and Evolution* 13:105-120
  32. Henderson EM, Derocher AE. 2021. Polar bear (*Ursus maritimus*) use of the Cape Bathurst polynya and flaw lead. *Arctic Science* 8:395-413

33. Smereka CA, Frame PF, Edwards MA, Slater OM, Frame D, Derocher AE. 2021. Space use of cougars at the northern edge their range. *Journal of Mammalogy* 40:1042-1053
34. Togunov RR, Derocher AE, Lunn NJ, Auger-Méthé M. 2021. Characterising menotatic behaviours in movement data using hidden Markov models. *Methods in Ecology and Evolution* 12:1984-1998
35. Bohart AM, Lunn NJ, Derocher AE. 2021. Migration dynamics of polar bears (*Ursus maritimus*) in western Hudson Bay. *Behavioral Ecology* 32:440-451 doi:10.1093/beheco/araa140
36. Heemskerk S, Johnson AC, Hedman D, Trim V, Lunn NJ, McGeachy D, Derocher AE. 2020. Temporal dynamics of human-polar bear interactions in Churchill, Manitoba. *Global Ecology and Conservation* 24:e01320 doi: 10.1016/j.gecco.2020.e01320.
37. Smereka CA, Frame PF, Edwards MA, Frame DD, Slater OM, Derocher AE. 2020. Seasonal habitat selection of cougars (*Puma concolor*) by sex and reproductive state in west-central Alberta, Canada. *Wildlife Biology* 2020:wlb.00735
38. Biddlecombe B, Lunn NJ, McGeachy D, Bayne E, Derocher AE. 2021. Effects of sea ice fragmentation on individual variation in polar bear movement in Hudson Bay. *Marine Ecology Progress Series* 666:231-241
39. Bechshoft T, Luo Y, Bohart AM, Derocher AE, Richardson ES, Lunn NJ, Pearson DG. 2020. Monitoring spatially resolved trace elements in polar bear hair using single spot laser ablation ICP-MS. *Ecological Indicators* 119:106822
40. Johnson AC, Reimer JR, Lunn NJ, Stirling I, McGeachy D, Derocher AE. 2020. Influence of sea ice dynamics on population energetics of Western Hudson Bay polar bears. *Conservation Physiology* 8:10.1093/conphys/coaa1132
41. Henderson EM, Derocher AE, Lunn NJ, Montpetit B, Merrill EH, Richardson ES. 2021. Polar bear (*Ursus maritimus*) use of the western Hudson Bay flaw lead. *Marine Ecology Progress Series* 644:227-242
42. Johnson AC, Derocher AE. 2020. Variation in habitat use of Beaufort Sea polar bears. *Polar Biology* 43:1247-1260
43. Shave JR, Derocher AE, Cherry SG, Fortin, D. 2020. Seasonal and inter-annual variation in diet for gray wolves (*Canis lupus*) in Prince Albert National Park, Saskatchewan. *Wildlife Research* 2020:wlb.00695
44. Togunov RR, Klappstein NJ, Lunn NJ, Derocher AE, Auger-Méthé M. 2020. Opportunistic evaluation of modelled sea ice drift using passively drifting telemetry collars in Hudson Bay, Canada. *The Cryosphere* 14:1937-1950
45. Boucher N, Derocher AE, Richardson E. 2020. Spatial and temporal variability in ringed seal (*Pusa hispida*) stable isotopes in the Beaufort Sea. *Ecology and Evolution* 10:4178-4192
46. Lippold A, Aars J, Andersen M, Aubail A, Derocher AE, Dietz R, Eulaers I, Sonne C, Welker J, Wiig Ø, Routti H. 2020. Two decades of mercury concentrations in Barents Sea polar bears in relation to dietary sulfur, carbon and nitrogen. *Environmental Sciences & Technology* 54:7388-7397
47. Florko KRN, Higdon JW, Derocher AE, Richardson ES, Sahanatien V, Petersen SD. 2020. Polar bear denning distribution in the Canadian Arctic. *Polar Biology* 43:617-621
48. Klappstein NJ, Togunov RR, Lunn NJ, Derocher AE. 2020. Patterns of sea ice drift and polar bear (*Ursus maritimus*) movement in Hudson Bay. *Marine Ecology Progress Series* 641:227-240

49. Boonstra R, Bodner K, Bosson C, Delehanty B, Richardson ES, Lunn NJ, Derocher AE, Molnár PK. 2020. The stress of Arctic warming on polar bears. *Global Change Biology* 26: 4197-4214 doi.org/10.1111/gcb.1542
50. Biddlecombe B, Lunn NJ, McGeachy D, Bayne E, Derocher AE. 2020. Comparing sea ice habitat fragmentation metrics using integrated step selection analysis. *Ecology and Evolution* 10:4791-4800
51. Yurkowski DJ, Richardson E, Lunn NJ, Muir DCG, Johnson AC, Derocher AE, Ehrman AD, Houde, M, Young BG, Debets CD, Sciullo L, Thiemann GW, Ferguson SH. 2020. Contrasting temporal patterns of mercury, niche dynamics, and body condition of polar bears and ringed seals in a melting icescape. *Environmental Science and Technology* 54:2780-2789
52. Richardson ES, Davis C, Stirling I, Derocher AE, Lunn NJ. 2020. Variance in lifetime reproductive success of male polar bears. *Behavioral Ecology* 31:1224-1232
53. Boucher N, Derocher AE, Richardson E. 2019. Variability in polar bear (*Ursus maritimus*) stable isotopes in relation to environmental change in the Canadian Beaufort Sea. *Marine Ecology Progress Series* 630:215-225
54. Stirling I, Laidre K, Derocher AE, van Meurs R. 2019. Observations of short-term food caching in polar bears. *Arctic Science* 6:41-52
55. Reimer JR, Mangel M, Derocher AE, Lewis MA. 2019. Matrix methods for stochastic dynamic programming in ecology and evolutionary biology. *Methods in Ecology and Evolution* 10:1952-1965
56. Boucher N, Derocher AE, Richardson E. 2019. Space-use patterns affect stable isotopes of polar bears (*Ursus maritimus*) in the Beaufort Sea. *Polar Biology* 42:1581-1593
57. Shave JR, Derocher AE, Cherry SG, Thiemann GW. 2019. Chronic stress and body condition of wolf-killed prey in Prince Albert National Park, Saskatchewan. *Conservation Physiology* 7:coz037
58. Johnson AC, Hobson KA, Lunn NJ, McGeachy D, Richardson E, Derocher AE. 2019. Temporal variation in the foraging ecology of polar bears in western Hudson Bay. *Marine Ecology Progress Series* 619:187-199
59. Lambert Koizumi C, Derocher AE. 2019. Effect of grizzly bear and wolf predation risk on the habitat use and sexual segregation of a northern alpine ungulate. *PLoS One* 14:e0215519
60. Biddlecombe B, Derocher AE, Richardson E, Stirling I. 2019. Mating ecology of polar bears in the Beaufort Sea, Canada. *Polar Biology* 42:919-929
61. Reimer JR, Mangel M, Derocher AE, Lewis MA. 2019. Modelling optimal responses and fitness consequences in a changing Arctic. *Global Change Biology* 25:3450-3461
62. Reimer JR, Caswell H, Derocher AE, Lewis M. 2019. Ringed seal demography in a changing climate. *Ecological Applications* 29:e01855
63. Folio DM, Aars J, Gimenez O, Derocher AE, Wiig Ø, Cubaynes S. 2019. How many cubs can a mum raise? Maternal age and size influence litter size in polar bears. *Biology Letters* 15:20190070
64. Bechshoft T, Dyck M, St Pierre KA, Derocher AE, St Louis V. 2019. The use of hair as a proxy for total and methylmercury burdens in polar bear muscle tissue. *Science of the Total Environment* 686:1120-1128
65. Hamilton SG, Derocher AE. 2019. Assessment of global polar bear abundance and vulnerability. *Animal Conservation* 22:83-95
66. Lippold A, Bourgeon S, Aars J, Andersen M, Polder A, Lyche JL, Bytingsvik J, Jenssen BM, Derocher AE, Welker J, Routti H. 2018. Temporal trends of persistent organic pollutants in Barents Sea polar bears (*Ursus maritimus*) in

- relation to changes in feeding habits and body condition. *Environmental Science and Technology* 53:984-995
67. Liu Y, Richardson ES, Derocher AE, Lunn NJ, Lehmler H-J, Li X, Zhang Y, Cui JY, Cheng L, Martin JW. 2018. Hundreds of unrecognized organohalogen contaminants discovered in polar bear blood. *Angewandte Chemie* 57:16401-16406
  68. Yurkowski DJ,... Derocher, AE et al. 2018. Abundance and species diversity hotspots of tracked marine predators across the North American Arctic. *Diversity and Distributions* 25:328-345
  69. Tartu S, Aars J, Andersen M, Polder A, Bourgeon S, Merkel B, Lowther AD, Bytingsvik J, Welker JM, Derocher AE, Jenssen BM, Routti H. 2018. Choose your poison – Space-use strategy influences pollutant exposure in Barents Sea polar bears. *Environmental Science and Technology* 52:3211-3221
  70. O'Donovan SA, Budge SM, Hobson KA, Kelly AP, Derocher AE. 2018. Stable isotopes and fatty acids reveal intrapopulation variability in wolf diet. *Ecosphere* 9:e02420
  71. Vongraven D, Derocher AE, Bohart AM. 2018. Polar bear research – has science helped conservation? *Environmental Reviews* 26:358-368
  72. Viengkone M, Derocher AE, Richardson ES, Obbard ME, Dyck MG, Lunn NJ, Sahanatian V, Robinson BG, Davis CS. 2018. Assessing spatial discreteness of Hudson Bay polar bear populations using telemetry and genetics. *Ecosphere* 9(7):e02364
  73. Rode KD, Wilson RR, Douglas DC, Muhlenbruch V, Atwood TC, Regehr EV, Richardson E, Pilfold N, Derocher AE, Durner G, Stirling I, Peacock E, Amstrup S, St Martin M, Pagano A, Simac K. 2018. Spring fasting behavior among polar bears provides an index of ecosystem productivity. *Global Change Biology* 24:410-423
  74. Bechshøft TO, Derocher AE, Viengkone M, Routti H, Aars J, Letcher RJ, Dietz R, Sonne C, Richardson E, Lunn NJ. 2018. On the integration of ecological and physiological variables in polar bear toxicology research: a systematic review. *Environmental Reviews* 26:1-12
  75. Robinson BG, Franke A, Derocher AE. 2017. Stable isotope mixing models fail to estimate the diet of an avian predator. *The Auk* 135:60-70
  76. Togunov RR, Derocher AE, Lunn NJ. 2017. Windscares and olfactory foraging in a large carnivore. *Scientific Reports* 7:46332
  77. Johnson A, Pongracz J, Derocher AE. 2017. Long distance movement of a female polar bear from Canada to Russia. *Arctic* 70:121-128
  78. Yee M, Reimer JM, Lunn NJ, Togunov RR, Pilfold NW, McCall AG, Derocher AE. 2017. Polar bear (*Ursus maritimus*) migration from maternal dens in western Hudson Bay. *Arctic* 70:319-327
  79. Castro de la Guardia L, Myers PG, Derocher AE, Lunn NJ, Terwisscha van Scheltinga AD. 2017. Sea ice cycle in western Hudson Bay, Canada, from a polar bear perspective. *Marine Ecology Progress Series* 364:225-233
  80. Robinson BG, Franke A, Derocher AE. 2017. Weather-mediated prey depletion causes food-limitation in a top avian predator. *Journal of Avian Biology* 48:1-11
  81. Nguyen L, Pilfold NW, Derocher AE, Stirling I, Bohart AM, Richardson E. 2017. Ringed seal (*Pusa hispida*) tooth annuli as an index of reproduction in the Beaufort Sea. *Ecological Indicators* 77:286-292
  82. Auger-Méthé M, Albertsen CM, Jonsen ID, Derocher AE, Lidgard DC, Studholme KR, Bowen WD, Crossin GT, Mills Flemming J. 2017.

- Spatiotemporal modelling of marine movement data using Template Model Builder (TMB). *Marine Ecology Progress Series* 565:237-249
83. Bechshøft TO, Derocher AE, Richardson E, Lunn NJ, St Louis V. 2016. Hair mercury concentrations in polar bear family groups. *Environmental Science and Technology* 50:5313-5319
  84. Pilfold NW, Hedman D, Stirling I, Derocher AE, Lunn NJ, Richardson E. 2016. Mass loss rates of fasting polar bears. *Physiological and Biochemical Zoology* 89:377-388
  85. Viengkone M, Derocher AE, Richardson E, Malenfant R, Miller J, Obbard M, Dyck M, Sahanatien V, Lunn N, Davis C. 2016. Comparing two genetic marker systems for assessing polar bear (*Ursus maritimus*) population structure in the Hudson Bay region. *Ecology and Evolution* 6:8474-8484
  86. Smereka CS, Edwards MA, Pongracz J, Branigan M, Pilfold N, Derocher AE. 2016. Barren-ground grizzly bear den selection, Mackenzie Delta, Northwest Territories. *Polar Biology* 40:503-516
  87. Auger-Méthé M, Field C, Moesgaard Albertsen C, Derocher AE, Lewis MA, Jonsen ID, Mills Flemming J. 2016. State-space models' dirty little secrets: even simple linear Gaussian models can have parameter and state estimation problems. *Scientific Reports* 6:26677
  88. Pilfold NW, McCall A, Derocher AE, Lunn NJ, Richardson E. 2016. Migratory response of polar bears to sea ice loss: to swim or not to swim. *Ecography* 40:189-199
  89. Mislan P, Derocher AE, St Louis VL, Richardson E, Lunn NJ, Janz DM. 2016. Assessing stress in western Hudson Bay polar bears using hair cortisol concentration as a biomarker. *Ecological Indicators* 71:47-54
  90. Pongracz J, Derocher AE. 2016. Summer refugia of polar bears (*Ursus maritimus*) in the southern Beaufort Sea. *Polar Biology* 40:753-763
  91. McCall AG, Pilfold NW, Derocher AE, Lunn NJ. 2016. Seasonal habitat selection by adult female polar bears in western Hudson Bay. *Population Ecology* 58:407-419
  92. Auger-Méthé M, Derocher AE, DeMars CA, Plank MJ, Codling EA, Lewis MA. 2016. Evaluating random search strategies for three mammals from distinct guilds. *Journal of Animal Ecology* 85:1411-1421
  93. Cullingham C, Thiessen CD, Derocher AE, Paquet PC, Miller JM, Hamilton JA, Coltman DW. 2016. Population structure and dispersal of wolves in the Canadian Rocky Mountains. *Journal of Mammalogy* 97:839-851
  94. Cherry SG, Derocher AE, Lunn NJ. 2016. Habitat-mediated timing of migration in polar bears: an individual perspective. *Ecology and Evolution* 6:5032-5042
  95. Sahanatien VS, Peacock E, Derocher AE. 2015. Spatial ecology of polar bears in a seasonal sea ice ecozone. *Ecology and Evolution* 5:2851-2864
  96. Pilfold NW, Derocher AE, Stirling I, Richardson E. 2015. Multi-temporal drivers of spring predation events for polar bears in a changing climate. *Oikos* 124:1098-1107
  97. Auger-Méthé M, Lewis MA, Derocher AE. 2015. Home ranges in moving habitats: polar bears and sea ice. *Ecography* 39:26-35
  98. Bechshøft TO, Derocher AE, Richardson E, Mislan P, Lunn NJ, Sonne C, Dietz R, Janz D, St Louis V. 2015. Cortisol and mercury in western Hudson Bay polar bear hair: is there a link? *Ecotoxicology* 24:1315-1321
  99. Robinson BG, Franke A, Derocher AE. 2015. Estimating nestling diet with cameras: quantifying uncertainty from unidentifiable food deliveries. *Wildlife Biology* 21:277-282

100. McCall AG, Derocher AE, Lunn NJ. 2015. Home range distribution of polar bears in western Hudson Bay. *Polar Biology* 38:343-355
101. Edwards MA, Derocher AE. 2015. Mating-related behaviour of grizzly bears inhabiting marginal habitat at the periphery of their North American range. *Biological Processes* 111:75-83
102. Auger-Méthé M, Derocher AE, Plank MJ, Codling EA, DeMars CA, Lewis MA. 2015. Differentiating between the Lévy and the intermittent search strategies. *Methods in Ecology and Evolution* 6:1179-1189
103. Peacock E, Sonsthagen AS, Obbard ME, Boltunov A, Regehr EV, Ovsayanikov N, Aars J, Atkinson S, Sage GK, Zeyl E, Bachmann L, Ehrich D, Scribner KT, Amstrup SC, Belikov S, Born E, Derocher AE, Stirling I, Taylor MK, Wiig Ø, Paetkau D, Talbot SL. 2015. Implications of the circumpolar genetic structure of polar bears for their ecology, evolution and conservation biology. *PLoS One* 10:e112021
104. Bromaghin JF, Amstrup SC, McDonald TL, Stirling I, Derocher AE, Richardson ES, Regehr EV, Douglas DC, Durner GM. 2014. Polar bear population dynamics in the southern Beaufort Sea during a period of sea ice decline. *Ecological Applications* 25:634-651
105. Barker OE, Derocher AE, Edwards MA. 2014. Use of Arctic ground (*Urocitellus parryii*) by brown bears (*Ursus arctos*). *Polar Biology* 38:369-379
106. Hamilton SG, Castro de la Guardia L, Derocher AE, Sahanatien V, Tremblay B, Huard D. 2014. Projected polar bear sea ice habitat in the Canadian Arctic Archipelago. *PLoS One* 9:e113746
107. Robinson B, Franke A, Derocher AE. 2014. The influence of weather and lemmings on spatiotemporal in the abundance of multiple avian guilds in the Arctic. *PLoS One* 9:e101495
108. Pilfold NW, Derocher AE, Richardson E. 2014. Influence of interference competition on the distribution of a wide-ranging, non-territorial carnivore. *Global Ecology and Biogeography* 23:425-435
109. Pilfold NW, Derocher AE, Stirling I, Richardson E. 2013. Polar bear predatory behaviour reveals seascape distribution of ringed seal lairs. *Population Ecology* 56:129-136
110. Molnár PK, Lewis MA, Derocher AE. 2013. Estimating Allee dynamics before they can be observed: polar bears as a case study. *PLoS One* 9:e85410
111. Rode KD, Regehr EV, Douglas D, Durner G, Derocher AE, Thiemann GW, Budge S. 2013. Variation in the response of an Arctic top predator experiencing habitat loss: feeding and reproductive ecology of two polar bear populations. *Global Change Biology* 20:76-88
112. Castro de la Guardia L, Derocher AE, Myers P, Terwisscha van Scheltinga AD, Lunn NJ. 2013. Future sea ice conditions in western Hudson Bay and consequences for polar bears in the 21<sup>st</sup> century. *Global Change Biology* 19:2675-2687
113. Dietz R, Sonne C, Basu N, Braune B, O'Hara T, Letcher RJ, Scheuhammer T, Andersen M, Andreasen C, Andriashek D, Asmund G, Aubail A, Baagøe H, Born EW, Chan HM, Derocher AE, Grandjean P, Knott K, Kirkegaard M, Krey A, Lunn N, Messier F, Obbard M, Olsen MT, Ostertag S, Peacock E, Renzoni A, Rigét FF, Skaare JU, Stern G, Stirling I, Taylor M, Wiig Ø, Wilson S, Aars J. 2013. What are the toxicological effects of mercury in Arctic biota? *Science of the Total Environment* 443:775-790
114. Bytingsvik J, Simon E, Leonards PEG, Lamoree M, Lie E, Aars J, Derocher AE, Wiig Ø, Jenssen BM, Hamers T. 2013. Transthyretin-binding activity of



- contaminants in blood from polar bears (*Ursus maritimus*) cubs. *Environmental Science and Technology* 47:4778-4786
115. Edwards MA, Derocher AE, Nagy JA. 2013. Home range size variation in female Arctic grizzly bears relative to reproductive status and resource availability. *PloS One* 8:e68130
  116. Thiemann GW, Derocher AE, Cherry SG, Lunn NJ, Peacock E, Sahanatien V. 2013. Effects of chemical immobilization on the movement rates of free-ranging polar bears. *Journal of Mammalogy* 94:386-397
  117. Derocher AE, Aars J, Amstrup SC, Cutting A, Lunn NJ, Molnár PK, Obbard ME, Stirling I, Thiemann GW, Vongraven D, Wiig Ø, York G. 2013. Rapid ecosystem change and polar bear management. *Conservation Letters* 6:368-375
  118. Cherry SG, Derocher AE, Thiemann GW, Lunn NJ. 2013. Polar bear migratory patterns and seasonal fidelity in relation to sea ice dynamics. *Journal of Animal Ecology* 82:912-921
  119. Miller SD, McLellan BN, Derocher AE. 2013. Large carnivore management in North America. *International Journal of Environmental Science* 70:383-398
  120. Stirling I, Derocher AE. 2012. Effects of climate warming on polar bears: a review of the evidence. *Global Change Biology* 18:2694-2706
  121. Pilfold NW, Derocher AE, Stirling I, Richardson ES, Andriashek DS. 2012. Age and sex composition of seals killed by polar bears in the eastern Beaufort Sea. *PLoS One* 7:e41429
  122. Bytingsvik J, Leeuwen SPJ, Hamers T, Swart K, Aars J, Lie E, Nilsen EME, Wiig Ø, Derocher AE, Jenssen BM. 2012. Perfluoralkyl substances in polar bear mother-cub pairs: A comparative study based on plasma levels in 1998 and 2008. *Environment International* 49:92-99
  123. Vongraven D, Aars, J, Amstrup S, Atkinson SN, Belikov S, Born EW, DeBruyn TD, Derocher AE, Durner G, Gill M, Lunn N, Obbard ME, Omelak J, Ovsyanikov N, Peacock E, Richardson E, Sahanatien V, Stirling I, Wiig Ø. 2012. A circumpolar monitoring plan for polar bears. *Ursus Monograph* 5:1-66
  124. Sahanatien V, Derocher AE. 2012. Monitoring sea ice habitat fragmentation for polar bear conservation. *Animal Conservation* 15:397-406
  125. Andersen M, Derocher AE, Wiig Ø, Aars J. 2012. Polar bear (*Ursus maritimus*) maternity den distribution in Svalbard, Norway. *Polar Biology* 35:499-508
  126. Bytingsvik J, Lie E, Aars J, Wiig Ø, Derocher AE, Jenssen BM. 2012. PCBs and OH-PCBs in polar bear mother-cub pairs: A comparative study based on plasma levels in 1998 and 2008. *Science of the Total Environment* 417-418:117-128
  127. Derocher AE, Andersen M, Wiig Ø, Aars J, Hansen E, Biuw M. 2011. Sea ice dynamics affects polar bear den ecology at Hopen Island, Svalbard, Norway. *Marine Ecology Progress Series* 441:273-279
  128. Auger-Méthé M, Cassady St Clair C, Lewis MA, Derocher AE. 2011. Sampling rate and misidentification of Lévy and non-Lévy movement paths: comment. *Ecology* 92:1699-1701
  129. St Louis VL, Derocher AE, Stirling I, Graydon JA, Lee C, Jocksch E, Richardson E, Ghorpade S, Kwan AK, Kirk JL, Lehnherr I, Swanson HK. 2011. Differences in mercury bioaccumulation between polar bears (*Ursus maritimus*) from the Canadian high and sub Arctic. *Environmental Sciences and Technology* 45:5922-5928
  130. Derocher AE. 2010. The prospect for polar bears. *Nature* 468:905-906
  131. Hedberg GE, Derocher AE, Andersen M, Rogers QR, DePeters EJ, Lönnerdal B, Mazzaro L, Chesney RW, Hollis B. 2011. Milk composition in free-ranging

- polar bears (*Ursus maritimus*) from Svalbard, Norway as a model for captive rearing milk formula. *Zoo Biology* 29:1-16
132. Molnár PK, Derocher AE, Klanjscek T, Lewis MA. 2011. Predicting climate change impacts on polar bear litter size. *Nature Communications* 2:186
  133. Peacock L, Derocher AE, Thiemann GW, Stirling I. 2011. Conservation of Canada's polar bears in a changing world. *Canadian Journal of Zoology* 89:371-384
  134. Nagy JA, Johnson DL, Larter NC, Campbell MW, Derocher AE, Kelly A, Dumond M, Allaire D, Croft B. 2011. Subpopulation structure of caribou (*Rangifer tarandus* L.) in arctic and sub-arctic Canada. *Ecological Applications* 21:2334-2348
  135. Hoffman M,... Derocher AE, et al. 2010. The impact of conservation on the status of the world's vertebrates. *Science* 330:1503-1509
  136. Barker OE, Derocher AE. 2010. Habitat selection by Arctic ground squirrels (*Spermophilus parryi*). *Journal of Mammalogy* 91:1251-1260
  137. Åsbakk K, Aars J, Derocher AE, Wiig Ø, Oksanen A, Born EW, Dietz R, Sonne C, Tryland M, Godfroid J, Kapel CM. 2010. Serosurvey for *Trichinella* in polar bears (*Ursus maritimus*) from Svalbard and the Barents Sea. *Veterinary Parasitology* 172:256-263
  138. Peacock L, Derocher AE, Lunn N, Obbard M. 2010. Polar bear ecology and management in Hudson Bay in the face of climate change. Page 93-115, In Ferguson S, Loseto L, Mallory M. (eds.) *A little less Arctic: top predators in the world's largest northern inland sea, Hudson Bay*. Springer
  139. Edwards MA, Derocher AE, Hobson KA, Branigan M, Nagy JA. 2011. Fast carnivores and slow herbivores: differential foraging strategies among grizzly bears in the Canadian Arctic. *Oecologia* 165:877-889
  140. Lambert Koizumi C, Derocher AE. 2011. Spatial overlap of Dall sheep, grizzly bears and wolves in the Richardson Mountains. *Galemys* 22:31-42
  141. Derocher AE, Andersen M, Wiig Ø, Aars J. 2010. Sexual dimorphism and the mating ecology of polar bears (*Ursus maritimus*) at Svalbard. *Behavioural Ecology and Sociobiology* 64:939-946
  142. Derocher AE, Wiig Ø, Van Parijs SM. 2010. Nursing vocalisations of a polar bear cub. *Ursus* 21:189-191
  143. Molnár PK, Derocher AE, Thiemann GW, Lewis MA. 2010. Predicting survival, reproduction and abundance of polar bears under climate change. *Biological Conservation* 143:1612-1622
  144. Towns L, Derocher AE, Stirling I, Lunn NJ. 2010. Changes in land distribution of polar bears in western Hudson Bay. *Arctic* 63:206-212
  145. Cherry SG, Derocher AE, Hobson KA, Stirling I, Thiemann GW. 2010. Quantifying dietary pathways of proteins and lipids to tissues of polar bears. *Journal of Applied Ecology* 48:373-381
  146. Medill S, Derocher AE, Stirling I, Lunn NJ. 2010. Reconstructing reproductive histories of female polar bears (*Ursus maritimus*) using cementum patterns in premolar teeth. *Polar Biology* 33:115-124
  147. Medill S, Derocher AE, Stirling I, Lunn NJ, Moses R. 2009. Estimating cementum annuli width in polar bears: identifying sources variation and error. *Journal of Mammalogy* 90:1256-1264
  148. Chesney RW, Hedberg GE, Rogers QR, Dierenfeld ES, Hollis BE, Derocher A, Andersen M. 2009. Does taurine deficiency cause metabolic bone disease and rickets in polar bear cubs raised in captivity? *Taurine 7, Advances in Experimental Medicine and Biology* 643:325-331

149. Towns L, Derocher AE, Stirling I, Lunn NJ, Hedman D. 2009. Spatial and temporal patterns of problem polar bears in Churchill, Manitoba. *Polar Biology* 32:1529-1537
150. Molnár PK, Klanjscek T, Derocher AE, Obbard ME, Lewis MA. 2009. A body composition model to estimate mammalian energy stores and metabolic rates from body mass and body length, with application to polar bears. *Journal of Experimental Biology* 212:2313-2323
151. Edwards MA, Nagy JA, Derocher AE. 2009. Low site fidelity and home range drift in a wide-ranging large Arctic omnivore. *Animal Behaviour* 77:23-28
152. Barker O, Derocher AE. 2009. Brown bear (*Ursus arctos*) predation of broad whitefish (*Coregonus nasus*) in the Mackenzie Delta Region, Northwest Territories. *Arctic* 62:312-316
153. Cherry SG, Stirling I, Richardson ES, Derocher AE. 2009. Monitoring the fasting physiology of polar bears in response to environmental change. *Polar Biology* 32:383-391
154. Oksanen A, Åsbakk K, Prestrud KW, Aars J, Derocher AE, Tryland M, Wiig Ø, Dubey JP, Sonne C, Dietz R, Andersen M, Born EW. 2009. Prevalence of antibodies against *Toxoplasma gondii* in polar bears (*Ursus maritimus*) from Svalbard and east Greenland. *Journal of Parasitology* 95:89-94
155. Durner GM, Douglas DC, Nielson RM, Amstrup SC, McDonald TL, Stirling I, Mauritzen M, Born EW, Wiig Ø, DeWeaver E, Serreze MC, Belikov SE, Holland MM, Maslanik J, Aars J, Bailey DA, Derocher AE. 2009. Predicting 21<sup>st</sup>-century polar bear habitat distribution from global climate models. *Ecological Monographs* 79:25-58
156. Andersen M, Derocher AE, Wiig Ø, Aars J. 2008. Movements of two Svalbard polar bears using geographical positioning system satellite transmitters. *Polar Biology* 31:905-911
157. Schipper J,... Derocher AE, et al. 2008. The status of the world's land and marine mammals: diversity, threat and knowledge. *Science* 322:225-230
158. Thiemann GW, Derocher AE, Stirling I. 2008. Polar bear conservation in Canada: an ecological basis for identifying designatable units. *Oryx* 42:504-515
159. Edwards MA, Nagy JA, Derocher AE. 2008. Using subpopulation structure for barren-ground grizzly bear management. *Ursus* 19:91-104
160. Stirling I, Derocher AE, Rode K, Gough WA. 2008. Response to Dyck et al. (2008) on polar bears and climate change in western Hudson Bay. *Ecological Complexity* 5:193-201
161. Molnár PK, Derocher AE, Lewis MA, Taylor MK. 2008. Modeling the mating system of polar bears – a mechanistic approach to the Allee effect. *Proceedings of the Royal Society B* 275:217-226
162. Stirling I, Richardson E, Thiemann GW, Derocher AE. 2008. Unusual predation attempts of polar bears on ringed seals in the southern Beaufort Sea: possible significance of changing spring ice conditions. *Arctic* 61:14-22
163. Jores J, Derocher AE, Staubach C, Aschfalk A. 2008. Occurrence and prevalence of *Clostridium perfringens* in polar bears from Svalbard, Norway. *Journal of Wildlife Diseases* 44:155-158
164. Stone IR, Derocher AE. 2007. An incident of polar bear infanticide and cannibalism on Phippsøya, Svalbard. *Polar Record* 43:171-173
165. Parks EK, Derocher AE, Lunn NJ. 2006. Movement patterns of polar bears (*Ursus maritimus*) on the sea ice of Hudson Bay. *Canadian Journal of Zoology* 84:1281-1294
166. Muir DCG, Backus S, Derocher AE, Dietz R, Evans T, Gabrielsen GW, Nagy J, Norstrom RJ, Sonne C, Stirling I, Taylor MK, Letcher RJ. 2006. Brominated

- flame retardants in polar bears (*Ursus maritimus*) from Alaska, the Canadian Arctic, Greenland, and Svalbard. *Environmental Science and Technology* 40:449-455
167. Sasaki M, Endo H, Wiig Ø, Derocher AE, Tsubota T, Taru H, Yamamoto M, Arashima K, Hayashi Y, Kitamura N, Yamada J. 2005. Adaptation of the hindlimbs for climbing in bears. *Annals of Anatomy* 187:153-160
  168. Derocher AE. 2005. Population ecology of polar bears at Svalbard, Norway. *Population Ecology* 47:267-275
  169. Smithwick M, Mabury SA, Solomon KR, Sonne C, Martin JW, Born EW, Dietz R, Derocher AE, Letcher RJ, Evans T, Gabrielsen GW, Nagy J, Stirling I, Taylor MK, Muir DCG. 2005. A circumpolar study of perfluoroalkyl contaminants in polar bears (*Ursus maritimus*). *Environmental Science and Technology* 39:5517-5523
  170. Verreault J, Muir DCG, Norstrom RJ, Stirling I, Fisk AT, Gabrielsen GW, Derocher AE, Evans TJ, Dietz R, Sonne C, Sandala GM, Gebbink W, Riget FF, Taylor MK, Nagy J, Letcher RJ. 2005. Chlorinated hydrocarbon contaminants and metabolites in polar bears (*Ursus maritimus*) from Alaska, Canada, East Greenland, and Svalbard: 1996–2002. *Science of the Total Environment* 351-352:369-390
  171. Tryland M, Neuvonen E, Huovilainen A, Tapiovaara H, Osterhaus A, Wiig Ø, Derocher AE. 2005. Serologic survey for selected virus infections in polar bears at Svalbard. *Journal of Wildlife Diseases* 41:310-316
  172. Derocher AE, Wiig Ø, Andersen M. 2005. Sexual dimorphism of polar bears at Svalbard. *Journal of Mammalogy* 86:895-901
  173. Lie E, Larsen HJS, Larsen S, Johansen GM, Derocher AE, Lunn NJ, Norstrom RJ, Wiig Ø, Skaare JU. 2005. Does high organochlorine (OC) exposure impair the resistance to infection in polar bears (*Ursus maritimus*)? Part II: Possible effect of OCs on mitogen- and antigen-induced lymphocyte proliferation. *Journal of Toxicology and Environmental Health Part A* 68:457-484
  174. Derocher AE, Lunn NJ, Stirling I. 2004. Polar bears in a warming climate. *Integrative and Comparative Biology* 44:163-176
  175. Pomponi M, Gavuzzo E, Bertonati C, Lydersen C, Wiig Ø, Derocher AE, Kovacs KM. 2004. Hemoglobin, pH and DPG/Chloride shifting. *Biochimie* 86:927-932
  176. Grahl-Nielsen O, Andersen M, Derocher AE, Lydersen C, Wiig Ø, Kovacs KM. 2004. Reply to comment on Grahl-Nielsen et al. (2003): sampling, data treatment and predictions in investigations on fatty acids in marine mammals. *Marine Ecology Progress Series* 281:303-306
  177. Lie E, Larsen HJS, Larsen S, Johansen GM, Borgen T, Derocher AE, Lunn NJ, Norstrom RJ, Wiig Ø, Skaare JU. 2004. Does high organochlorine (OC) exposure impair the resistance to infection in polar bears (*Ursus maritimus*)? Part I: Effect of OC on the humoral immunity. *Journal of Toxicology and Environmental Health* 67:555-582
  178. Braathen M, Derocher AE, Wiig Ø, Sørmo EG, Lie E, Skaare JU, Jenssen BM. 2004. Thyroid hormone and retinol status in polar bears (*Ursus maritimus*) at Svalbard in relation to plasma concentrations of PCBs. *Environmental Health Perspectives* 112:826-833
  179. Wolkers H, van Bavel B, Derocher AE, Wiig Ø, Kovacs KM, Lydersen C, Lindstrøm G. 2004. Congener-specific accumulation and food chain transfer of polybrominated diphenyl ethers in two arctic food chains. *Environmental Science and Technology* 38:1667-1674
  180. Oskam IC, Ropstad E, Lie E, Derocher AE, Wiig Ø, Dahl E, Larsen S, Skaare JU. 2004. Organochlorines affect the steroid hormone cortisol in free-ranging

- polar bears (*Ursus maritimus*) at Svalbard, Norway. *Journal of Toxicology and Environmental Health Part A* 67:959-977
181. Grahl-Nielsen O, Andersen M, Derocher AE, Lydersen C, Wiig Ø, Kovacs KM. 2004. Fatty acid composition of the adipose tissue of polar bears and their prey: ringed seals, bearded seals and harp seals. *Marine Ecology Progress Series* 265:275-282
  182. Olsen GH, Mauritzen M, Derocher AE, Sørmo EG, Skaare JU, Wiig Ø, Jenssen BM. 2003. Space-use strategy is an important determinant of PBC concentrations in female polar bears in the Barents Sea. *Environmental Science and Technology* 37:4919-4924
  183. Oskam IC, Ropstad E, Dahl E, Lie E, Derocher AE, Wiig Ø, Larsen S, Wiger R, Skaare JU. 2003. Organochlorines affect the major androgenic hormone, testosterone, in male polar bears (*Ursus maritimus*) at Svalbard. *Journal of Toxicology and Environmental Health Part A* 66:2119-2139
  184. Urashima T, Nagata H, Nakamura T, Arai I, Saito T, Imazu K, Hayashi T, Derocher AE, Wiig O. 2003. Differences in oligosaccharide pattern of a sample of polar bear colostrum and mid-lactation milk. *Comparative Biochemistry and Physiology Part B* 136:887-896
  185. Mauritzen M, Belikov SE, Boltunov AN, Derocher AE, Hansen E, Ims RA, Wiig Ø, Yoccoz N. 2003. Functional responses in polar bear habitat selection. *Oikos* 100:112-124
  186. Lie E, Bernhoft A, Riget F, Belikov SE, Boltunov AN, Derocher AE, Garner GW, Wiig Ø, Skaare JU. 2003. Geographical distribution of organochlorine pesticides (OCPs) in polar bears (*Ursus maritimus*) in the Norwegian and Russian Arctic. *Science of the Total Environment* 306:159-170
  187. Mauritzen M, Derocher AE, Pavlova O, Wiig Ø. 2003. Polar bears on drift ice - walking the treadmill. *Animal Behaviour* 66:108-113
  188. Haave M, Ropstad E, Derocher AE, Lie E, Dahl E, Wiig Ø, Skaare JU, Jenssen BM. 2003. PCBs and reproductive hormones in female polar bears at Svalbard. *Environmental Health Perspectives* 111:431-436
  189. Derocher AE, Wolkers H, Colborn T, Schlabach M, Larsen TS, Wiig Ø. 2003. Contaminants in Svalbard polar bear samples archived since 1967 and possible population level effects. *Science of the Total Environment* 301:163-174
  190. Skaare JU, Larsen HJ, Lie E, Bernhoft A, Derocher AE, Norstrom R, Ropstad E, Lunn NF, Wiig Ø. 2002. Ecological risk assessment of persistent organic pollutants in the arctic. *Toxicology* 181-182:193-197
  191. Pomponi M, Bertonati C, Patamia M, Marta M, Derocher AE, Lydersen C, Kovacs KM, Wiig Ø, Bårdgard AJ. 2002. Polar bear haemoglobin and human Hb A<sub>0</sub>: same 2,3-diphosphoglycerates binding site but asymmetry of the binding? *Hemoglobin* 26:363-371
  192. Derocher AE, Wiig Ø, Andersen M. 2002. Diet composition of polar bears in Svalbard and the western Barents Sea. *Polar Biology* 25:448-452
  193. Derocher AE, Wiig Ø. 2002. Postnatal growth in body length and mass of polar bears (*Ursus maritimus*) at Svalbard. *Journal of Zoology* 256:343-349
  194. Tryland M, Derocher AE, Brun E, Kierulf P, Arnemo JA, Wiig Ø, Ølberg RA. 2002. Plasma chemistry in free-ranging polar bears. *Journal of Wildlife Diseases* 38:566-575
  195. Mauritzen M, Derocher AE, Wiig Ø, Belikov SE, Boltunov A, Garner GW. 2002. Using satellite telemetry to define spatial population structure in polar bears in the Norwegian and western Russian Arctic. *Journal of Applied Ecology* 39:79-90

196. Henriksen EO, Wiig Ø, Skaare JU, Gabrielsen GW, Derocher AE. 2001. Monitoring PCBs in polar bears: lessons learned from Svalbard. *Journal of Environmental Monitoring* 3:493-498
197. Mauritzen M, Derocher AE, Wiig Ø. 2001. Space-use strategies of female polar bears in a dynamic sea ice habitat. *Canadian Journal of Zoology* 79:1704-1713
198. Tryland M, Derocher AE, Wiig Ø, Godfroid J. 2001. *Brucella* sp. antibodies in polar bears from Svalbard and the Barents Sea. *Journal of Wildlife Diseases* 37:523-531
199. Wiig Ø, Derocher AE. 2001. Body composition of three polar bear (*Ursus maritimus*) cubs found dead at Svalbard. *Polar Biology* 24:383-385
200. Skaare JU, Bernhoft A, Wiig Ø, Norum KR, Eide DM, Derocher AE. 2001. Relationships between plasma levels of organochlorines, retinol and thyroid hormones from polar bears (*Ursus maritimus*) at Svalbard. *Journal of Toxicology and Environmental Health* 62:227-241
201. Andersen M, Lie E, Derocher AE, Belikov SE, Bernhoft A, Boltunov A, Garner GW, Skaare JU, Wiig Ø. 2001. Geographic variation of PCB congeners in polar bears (*Ursus maritimus*) from Svalbard east to the Chukchi Sea. *Polar Biology* 24:231-238
202. Pomponi M, Bertonati C, Fuglei E, Wiig Ø., Derocher AE. 2000. 2,3-DPG-Hb complex: A hypothesis for an asymmetric binding. *Biophysical Chemistry* 84:253-260
203. Bernhoft A, Skaare JU, Wiig Ø, Derocher AE, Larsen HJS. 2000. Possible immunotoxic effects of organochlorines in polar bears (*Ursus maritimus*) at Svalbard. *Journal of Toxicology and Environmental Health* 59:561-574
204. Urashima T, Yamashita T, Nakamura T, Arai I, Saito T, Derocher AE, Wiig Ø. 2000. Chemical characterization of milk oligosaccharides of the polar bear, *Ursus maritimus*. *Biochimica et Biophysica Acta* 1475:395-408
205. Derocher AE, Wiig Ø, Bangjord G. 2000. Predation of Svalbard reindeer by polar bears. *Polar Biology* 23:675-678
206. Boulanger J, Martin K, Kaiser GW, Derocher AE. 2000. Evaluating uncertainty in estimating population trends for research and conservation of marbled murrelets. Society of Canadian Ornithologists Special Publication 1. *Biology and Conservation of Forest Birds*. pp. 53-63
207. Skaare JU, Bernhoft A, Derocher A, Gabrielsen GW, Goksøyr A, Henriksen E, Larsen HJ, Lie E, Wiig Ø. 2000. Organochlorines in top predators at Svalbard – occurrence, levels and effects. *Toxicology Letters* 112:103-109
208. Paetkau D, Amstrup SC, Born EW, Calvert W, Derocher AE, Garner GW, Messier F, Stirling I, Taylor M, Wiig Ø, Strobeck C. 1999. Genetic structure of the world's polar bear populations. *Molecular Ecology* 8:1571-1585
209. Derocher AE, Wiig Ø. 1999. Infanticide and cannibalism of juvenile polar bears in Svalbard. *Arctic* 52:307-310
210. Derocher AE, Wiig Ø. 1999. Observation of adoption in polar bears (*Ursus maritimus*). *Arctic* 52:413-415
211. Gjerde B, Derocher AE, Wiig Ø. 1999. Absence of trypanosomes in polar bears (*Ursus maritimus*) in Svalbard. *Veterinary Record* 145:526-527
212. Derocher AE. 1999. Latitudinal variation in litter size: ecology or methodology? *Polar Biology* 22:350-356
213. Wasteson Y, Arnemo JM, Johansen BK, Klungseth Johansen B, Vold L, Mathiesen SD, Olsen MA, Wiig Ø, Derocher AE. 1999. Analysis of faecal samples from wild animals for verocytotoxin producing *Escherichia coli* and *E. coli* O157. *Veterinary Record* 144:646-647

214. Wiig Ø, Derocher AE. 1999. Application of aerial survey methods to polar bears in the Barents Sea. In *Marine Mammal Survey and Assessment Methods*. Edited by Garner GW, Amstrup SC, Laake JL, Manly BFJ, McDonald LL, Robertson DG, AA Bolkema Publishers, Rotterdam. pp. 27-36
215. Wiig Ø, Derocher AE, Belikov SE. 1999. Ringed seals (*Phoca hispida*) breeding in the drifting pack-ice of the Barents Sea. *Marine Mammal Science* 15:595-598
216. Wiig Ø, Derocher AE, Cronin M, Skaare JU. 1998. Female pseudohermaphrodite polar bears at Svalbard. *Journal of Wildlife Diseases* 34:792-796
217. Derocher AE, Stirling I. 1998. Geographic variation in growth of polar bears. *Journal of Zoology* 245:65-72
218. Derocher AE, Stirling I. 1998. Maternal investment and offspring size in polar bears (*Ursus maritimus*). *Journal of Zoology* 245:253-260
219. Derocher AE, Stirling I. 1997. Male-biased harvesting of polar bears in western Hudson Bay. *Journal of Wildlife Management* 61:1075-1082
220. Derocher AE, Stirling I. 1996. Aspects of survival in juvenile polar bears. *Canadian Journal of Zoology* 74:1246-1252
221. Kaiser GW, Derocher AE, Crawford S, Gill MJ, Manley IA. 1995. A capture technique for marbled murrelets in coastal inlets. *Journal of Field Ornithology* 66:321-333
222. Derocher AE, Stirling I. 1995. Temporal variation in reproduction and body mass of polar bears in western Hudson Bay. *Canadian Journal of Zoology* 73:1657-1665
223. Derocher AE, Stirling I. 1995. Estimation of polar bear population size and survival in western Hudson Bay. *Journal of Wildlife Management* 59:215-221
224. Derocher AE, Stirling I. 1994. Age-specific reproductive performance of female polar bears. *Journal of Zoology* 234:527-536
225. Derocher AE, Taylor M. 1994. Density-dependent population regulation of polar bears. Taylor M, Editor. Density-dependent population regulation of black, brown, and polar bears. *International Conference on Bear Research and Management Monograph Series* No. 3. Yellowstone National Park, Wyoming: International Association for Bear Research and Management. pp. 25-30
226. Derocher AE, Andriashek D, Stirling I. 1993. Terrestrial foraging by polar bears during the ice-free period in western Hudson Bay. *Arctic* 46:251-254
227. Stirling I, Derocher AE. 1993. Possible impacts of climatic warming on polar bears. *Arctic* 46:240-245
228. Derocher AE, Andriashek D, Arnould JPY. 1993. Aspects of milk composition and lactation in polar bears. *Canadian Journal of Zoology* 71:561-567
229. Derocher AE, Stirling I, Andriashek D. 1992. Pregnancy rates and serum progesterone levels of polar bears in western Hudson Bay. *Canadian Journal of Zoology* 70:561-566
230. Derocher AE, Stirling I. 1992. The population dynamics of polar bears in western Hudson Bay. Edited by McCullough DR, Barrett RH. *Wildlife 2001: Populations*. London, UK. Elsevier Applied Science. pp. 1150-1159
231. Derocher AE, Stirling I. 1991. Oil contamination of two polar bears. *Polar Record* 27:56-57
232. Derocher AE, Stirling I. 1990. Aggregating behaviour of adult male polar bears. *Canadian Journal of Zoology* 68:1390-1394
233. Derocher AE, Stirling I. 1990. Distribution of polar bears (*Ursus maritimus*) during the ice-free period in western Hudson Bay. *Canadian Journal of Zoology* 68:1395-1403

234. Stirling I, Derocher AE. 1990. Factors affecting the evolution and behavioral ecology of the modern bears. *International Conference on Bear Biology and Management* 8:189-204
235. Derocher AE. 1990. Supernumerary mammae and nipples in the polar bear. *Journal of Mammalogy* 71:236-237
236. Derocher AE, Nelson RA, Stirling I, Ramsay MA. 1990. Effects of fasting and feeding on serum urea and serum creatinine levels in polar bears. *Marine Mammal Science* 6:196-203

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#### Book

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Derocher AE. 2012. Polar bears: A complete guide to their biology and behavior. Johns Hopkins University Press, Baltimore, MD. 249 pp

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#### Other Publications

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1. Derocher AE. 2024. Bears, drugs and guns. Wild Science: Unexpected encounters when working in nature. Waudby HP, Editor. Pages 92-99. CSIRO Press, Clayton, Australia.
2. Morehouse A, Mallory M, Derocher AE, Edwards MA, Obbard M. 2022. Black bear rehabilitation: literature and jurisdictional review. Report prepared for Nova Scotia's Department of Natural Resources and Renewables.
3. Bentall G, Derocher AE. 2022. Book review: Ethology and behavioral ecology of sea otters and polar bears. *Marine Mammal Science* 38:1721-1724
4. Dyck M, Dunham KD, Ware JV, Koons DN, Regehr EV, Hosmer DW, Derocher AE, Dale A, Pisapio J, Szor G. 2021. Re-estimating the abundance of the Davis Strait polar bear subpopulation by genetic mark-recapture. Final Report. Government of Nunavut, Department of Environment, Iglulik, NU
5. Rode KD, Obbard M, Belikov SE, Derocher AE, Durner GM, Thiemann GW, Tryland M, Letcher RJ, Meyersen R, Sonne C, Jenssen BM, Dietz R, Vongraven D. 2020. Polar bears *Ursus maritimus*. Pages 196-211. *in* Bears of the World. Edited by Penteriani V, Melletti M. Cambridge University Press, Cambridge, UK
6. Steyaertt SMJG, Zedrosser A, Filipczykova E, Leclerc M, Koike S, Crudge B, Dutta T, Sharma S, Ratnayeke S, Swaisgood R, Derocher A, Clapham M, Spady T, McLellan B, Ordiz A, Fernández-Gil A, Naves J, Delibes M, Swenson JE. 2020. Mating Strategies. Pages 21-25. In press. *in* Bears of the World. Edited by Penteriani V, Melletti M. Cambridge University Press, Cambridge, UK
7. COSEWIC. 2018. Polar bear assessment and update status report. Prepared by Sahanatien V, Derocher AE, Thiemann G. COSEWIC Secretariat, Ottawa, ON, Canada
8. Boyce MS, Derocher AE, Garshelis DL. 2016. Scientific review of grizzly bear harvest management system in British Columbia. Report to the Ministry of Forests, Lands and Natural Resource Operations. Victoria, BC
9. Derocher AE contributing author to Larsen JN, Anisimov OA, Constable A, A.B. Hollowed AB, Maynard N, Prestrud P, Prowse TD, Stone JMR. 2014: Polar regions. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Barros VR, Field CB, Dokken, DJ, Mastrandrea MD, Mach KJ, Bilir TE, Chatterjee M, Ebi KL, Estrada YO, Genova RC, Girma B, Kissel ES, Levy AN, MacCracken S, Mastrandrea PR, White LL. (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1567-1612



10. Derocher AE. 2013. Polar bears in a rapidly changing world. *Bare Essentials* July/August 117-122
11. Derocher A. 2013. Last Ice Area last hope for polar bears. *The Circle* 2013:14-15
12. Derocher AE. 2013. Heating up conservation. *Conservation Biology* 27:638-639
13. Derocher AE. 2012. Polar bears in Northwest Greenland: An interview survey about the catch and the climate. Born, Heilman, Holm and Laidre. 2011. Copenhagen: Museum Tusculanum Press. 232 p, illustrated, hard cover. ISBN 978-87-635-3168-9. £47.49. *Polar Record* 49
14. Derocher AE. 2012. Polar bears. In Herchel Island. Burn CR (Ed.). University of Calgary Press, Calgary, AB, Canada
15. Derocher AE. 2010. Polar bears and their disappearing world. *The Geographer* Autumn: 11
16. Nagy J, Derocher AE. 2009. Tracking Canada's caribou. *ARGOS Forum* 68:8-9
17. Derocher AE. 2008. Polar bears in a warming Arctic. In Sudden and disruptive climate change: exploring the risks and how we can avoid them. *Edited by* MacCracken MC, Moore F, Topping JC Jr. Earthscan, London, UK. pp. 193-204
18. Derocher AE. 2008. Watching as the ice goes. *Arctic Bulletin* 8:14-15
19. Derocher AE. 2008. Polar bear. Pg. 616-617. World Book Encyclopedia
20. Stirling I, Derocher AE. 2007. Melting under pressure: the real scoop on climate warming and polar bears. *The Wildlife Professional* Spring 43:23-27
21. Derocher AE. 2007. Book review: The world of the polar bear. *Arctic* 60:92-93
22. Derocher AE. 2007. The wanderings of white bears. *ARGOS Forum* 65:6-9
23. Derocher A. 2007. Ask the experts: Are polar bears increasing? *Animal Keeper's Forum* 34:304-305
24. Aars J, Lunn NJ, Derocher AE. (Eds.). 2006. Polar bears: Proceedings of the 14th Working Meeting of the IUCN Polar Bear Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK
25. Richardson E, Branigan M, Calvert W, Cattet M, Derocher AE, Doidge W, Hedman D, Lunn NJ, McLoughlin P, Obbard ME, Stirling I, Taylor M. 2006. Research on polar bears in Canada 2001-2004. In Polar bears: Proceedings of the 14th Working Meeting of the IUCN Polar Bear Specialist Group. *Edited by* Aars J, Lunn NJ, Derocher, AE. IUCN, Gland, Switzerland and Cambridge, UK, pp. 117-132
26. Nagy JA, Derocher A, Nielsen S, Wright W, Heikkila J. 2006. Modelling Seasonal Habitats of Boreal Woodland Caribou at the Northern Limits of Their Range: a Preliminary Assessment of the Lower Mackenzie River Valley, Northwest Territories, Canada. Department of Environment and Natural Resources, Yellowknife, Northwest Territories
27. Parks EK, Derocher AE. 2005. Where the bears are: movement patterns on the sea ice of Hudson Bay. *Polar Bears International* 12:5
28. Edwards MA, Derocher AE, Nagy JA. 2005. Barren-ground grizzly bears of the western Arctic: potential influence of oil and gas development and climate change. Pages 66-87 in *New Northern Lights: Graduate Research on Circumpolar Studies from the University of Alberta*. *Edited by* Caslteden HE, Danby RK, Giles AE, Pinard JP. CCI Press, University of Alberta, Edmonton, Canada
29. Falk-Petersen S, Hop H, Lewis P, Hansen E, Pavlov V, Derocher A, Poltermann M. 2004. The marginal ice zone of the Barents Sea: Temporal and spatial variability of the ice-ocean system of the ice-edge. Norwegian Polar Institute, Kortrapport/Brief Report Series nr. 1
30. Derocher AE. 2004. Polar bears. Pp. 156-168. In *Encyclopedia of the Arctic*. *Edited by* Nuttall M. Rutledge, New York
31. Derocher AE. 2004. Agreement on the conservation of polar bears. Pp. 16-17. In *Encyclopedia of the Arctic*. *Edited by* Nuttall M. Rutledge, New York

32. Derocher AE. 2004. Bears. Pp. 215-217. *In Encyclopedia of the Arctic. Edited by Nuttall M. Rutledge, New York*
33. Derocher AE. 2004. Marine mammals. Pp. 1248-1250. *In Encyclopedia of the Arctic. Edited by Nuttall M. Rutledge, New York*
34. Derocher AE. 2004. Narwhal. Pp. 1361-1362. *In Encyclopedia of the Arctic. Edited by Nuttall M. Rutledge, New York*
35. Derocher AE. 2003. It's seals on the rocks for polar bears – Reply. *Frontiers in Ecology and the Environment* 1: 180
36. Derocher AE, Lunn NJ, Stirling I. 2002. Polar bears in a changing climate. *Integrative and Comparative Biology* 42: 1219-1219
37. Derocher AE, Wiig Ø, Andersen M, Vongraven D, Ekker M. 2002. Polar bear research and management in Norway 1997-2000. pg. 75-84. *In Polar bears: Proceedings of the 13<sup>th</sup> Working Meeting of the IUCN/SSC Polar Bear Specialist Group; 23-28, June, 2001; Nuuk, Greenland. Gland, Switzerland and Cambridge, UK: IUCN*
38. Skaare JU, Larsen HJ, Lie E, Ropstad E, Bernhoft A, Derocher AE, Lunn NJ, Norstrom R., Wiig Ø. 2001. Relationships between high loads of organic contaminants and health effects in arctic mammals-Immune response and chlorinated environmental pollutants in polar bear. *Pharmacology and Toxicology* 88, suppl.1, 14
39. Oskam IC, Derocher AE, Lie E, Skaare JU, Wiig Ø, Larsen S, Dahl E, Ropstad E. 2001. Organochlorines effect the major androgenic hormone, testosterone, in male polar bears (*Ursus maritimus*). *Pharmacology and Toxicology* 88, suppl.1, 23
40. Lie E, Larsen HJS, Derocher AE, Lunn N, Norstrom R, Wiig Ø, Skaare JU. 2001. Reduced infection resistance in polar bears (*Ursus maritimus*) with high polychlorinated biphenyl (PCB) exposure? SETAC 22<sup>nd</sup> Annual Meeting Abstract Book, p.107
41. Wiig Ø, Blix AS, Derocher AE, Kovacs KM, Schweder T. 2001. National priorities for polar bear research in Norway. Report to the Norwegian National Committee on Polar Research, The Research Council of Norway, Oslo, 19 pp
42. Reid DG, Waterhouse L, Buck PEF, Derocher AE, Bettner R, French CD. Inventory of the Queen Charlotte Islands Ermine. In L.M. Darling, editor. 2000. Proceedings of a Conference on the Biology and Management of Species and Habitats at Risk, Kamloops, B.C., 15 - 19 Feb.,1999. Volume One. Pp. 393-406. B.C. Ministry of Environment, Lands and Parks, Victoria, BC and University College of the Cariboo, Kamloops, B.C. 490 pp
43. Lie E, Derocher AE, Wiig Ø, Skaare JU. 2000. Polychlorinated biphenyls in mother/offspring pairs of polar bears (*Ursus maritimus*) at Svalbard. *Organohalogen Compounds* 49:457-460
44. Braathen M, Haave M, Olsen GH, Derocher AE, Skaare JU, Ropstad E, Wiig Ø, Sormo EG, Jenssen BM. 2000. PCB contamination in relation to levels of thyroid hormones and progesterone, and migration patterns in polar bears (*Ursus maritimus*). *Organohalogen Compounds* 49:438-441
45. Wiig Ø, Derocher AE, Gjertz I, Scheie JO. 2000. Kunnskapsstatus for isbjørn ved Svalbard, of framtidige behov for kartlegging, overvåkning og forskning. (Status of information on polar bears of Svalbard with requirements for future mapping, monitoring, and research). Norwegian Polar Institute Meddelelser 160:33 pp. (in Norwegian)
46. Derocher AE. 2000. Reproductive biology of polar bears (*Ursus maritimus*): potential impacts of environmental pollutants. Centre for Reproductive Biology in Uppsala, Sweden. *CRU Report* No. 10. 9-22
47. Derocher AE. 2000. Polar bear research in Norway. *International Bear News* 9:8

48. Derocher AE. 2000. Counting bears from above. *Polar Bears Alive* 7(4): 1, 4
49. Boltunov A, Derocher AE. 2000. Norwegian-Russian Environmental Cooperation: Satellites track Barents Sea polar bears. *WWF Arctic Bulletin* 1:16
50. Derocher A E. 2000. Die Bären – Ein Überblick über Verhalten und Ökologie (Bears-Behaviour and ecology in overview). In *Die Bären (The Bears)*. Filander Press, Furth, Germany. pp. 29-66
51. Derocher AE. 1999. Svalbard: Land of the ice bears (Part II). *Polar Bears Alive* 6(4):4-5
52. Derocher AE. 1999. Svalbard: Land of the ice bears (Part I). *Polar Bears Alive* 6(3):4-5
53. Reid DG, Waterhouse L, Buck PEF, Derocher AE, Bettner R, French CD, Husband C. 1999. Status and management of ermine on the Queen Charlotte Islands, British Columbia. Forest Research Extension Note EN-001. British Columbia Forest Service. 4 pp
54. Derocher AE, Garner GW, Lunn NJ, Wiig Ø. (Editors) 1998. Polar bears: Proceedings of the 12<sup>th</sup> Working Meeting of the IUCN/SSC Polar Bear Specialist Group; February 3-7, 1997; Oslo, Norway. Gland, Switzerland and Cambridge, UK: IUCN
55. Loughheed LW, Beauchamp WD, Manley, IA, Derocher AE, Kaiser GW, Cooke F. 1998. Demography and ecology of Marbled Murrelets in Desolation Sound, British Columbia (1995). CWS/NSERC Wildlife Ecology Chair Technical Report No. 001. CWS/NSERC Wildlife Ecology Chair, Simon Fraser University, Burnaby, BC. 39 pp
56. Øritsland NA, Derocher AE, Stirling I. 1998. A view on computer modeling for polar bear population management. In *Polar bears: Proceedings of the 12<sup>th</sup> Working Meeting of the IUCN/SSC Polar Bear Specialist Group; February 3-7, 1997; Oslo, Norway* Gland, Switzerland and Cambridge, UK: IUCN.
57. Norris S, Pedersen AØ, Derocher AE. 1998. Isbjørner og varige organiske forurensningsstoffer (Polar bears and persistent organic pollutants). *Barents Watch* 1998:40-41
58. Wiig Ø, Derocher AE, Belikov SE. 1998. Ringed seals (*Phoca hispida*) breeding in the drifting pack-ice of the Barents Sea. The World Marine Mammal Science Conference, Monaco, 20-24 January 1998 Abstracts. pp. 148-149
59. Derocher AE. 1997. Polar bears face a warming world. *World Wide Fund for Nature Arctic Bulletin* 4.97:14-15
60. Derocher AE, Wiig, Ø, Gjertz I, Bøkseth, K, Sheie JO. 1998. Status of polar bears in Norway, 1997. In *Polar bears: Proceedings of the 12<sup>th</sup> Working Meeting of the IUCN/SSC Polar Bear Specialist Group; February 3-7, 1997; Oslo, Norway*. Gland, Switzerland and Cambridge, UK: IUCN
61. Derocher AE. 1997. Polar bears: living with the white bear. Nikita Ovsyanikov: book review. *Polar Record* 33:246-247
62. Wiig Ø, Bernhoft A, Derocher AE, Larsen HJ, Skaare JU. 1997. Organochlorine pollution in polar bears at Svalbard. Pp. 380. In *International Theriological Conference, abstracts, Acapulco, Mexico*
63. Skaare JU, Bernhoft A, Derocher AE, Larsen HJ, Wiig Ø. 1997. Polychlorinated biphenyls (PCBs) in polar bears at Svalbard. Pp. 125-126. In *The AMAP International Symposium on Environmental Pollution in the Arctic, extended abstracts, Tromsø, Norway, June 1-5, 1997*
64. Derocher AE. 1996. Population estimation and monitoring of polar bears in the Svalbard area: problem analysis. *Norsk Polar Institute Internal Report* 1-26

65. Derocher AE, Kaiser GW, Cooke F, Manley IA, Gill MJ. 1996. Research on Marbled Murrelets in the Desolation Sound area during the 1994 breeding season. *Canadian Wildlife Service Technical Report Series* No. 257. 54 pp
66. Derocher AE. 1995. Wildlife diversity and habitat relationships. in *A Field Guide for Site Identification and Interpretation for the Vancouver Forest Region. Edited by R. N. Green.* Ministry of Forests, 4595 Canada Way, Burnaby, BC, Canada
67. Stirling I, Derocher, A E. 1993. Behavior of bears. In I. Stirling (ed.). *Bears: majestic creatures of the wild.* Weldon Owen Publishing, Sydney, Australia. Pages 70-85
68. Derocher AE, Stirling, I. 1993. Studying bears. In I. Stirling (ed.). *Bears: majestic creatures of the wild.* Weldon Owen Publishing, Sydney, Australia. Pages 206-211
69. Derocher AE. 1993. Coloring of black bears. In I. Stirling (ed.). *Bears: majestic creatures of the wild.* Weldon Owen Publishing, Sydney, Australia. Pages 112-113
70. Derocher AE. 1993. Grizzly Adams. In I. Stirling (ed.). *Bears: majestic creatures of the wild.* Weldon Owen Publishing, Sydney, Australia. Page 220
71. Derocher AE. 1993. Bear milk. In I. Stirling (ed.). *Bears: majestic creatures of the wild.* Weldon Owen Publishing, Sydney, Australia. Page 66
72. Derocher AE. 1993. Why are bears so vulnerable. In I. Stirling (ed.). *Bears: majestic creatures of the wild.* Weldon Owen Publishing, Sydney, Australia. Pages 216-217
73. Derocher AE. 1993. A slouthe of beerys. In I. Stirling (ed.). *Bears: majestic creatures of the wild.* Weldon Owen Publishing, Sydney, Australia. Page 74
74. Stirling I, Andriashek D, Spencer C, Derocher AE. 1988. Assessment of the polar bear population in the eastern Beaufort Sea. Final report to the Northern Oil and Gas Action Program. Canadian Wildlife Service, 5320 122 Street, Edmonton, Alberta. T6H 3S5. 30 pp
75. Adams AK, Nelson RA, Stirling I, Derocher A. 1988. Heat loss patterns in the polar bear, *Ursus maritimus*. FASEB 2: A747
76. Stirling I, Andriashek D, Spencer C, Derocher A. 1987. Assessment of the polar bear population in the eastern Beaufort Sea. Progress report to the Northern Oil and Gas Action Program. Canadian Wildlife Service, 5320 122 Street, Edmonton, AB, T6H 3S5. 30 pp
77. Derocher AE, Miller SJ. 1986. Twelve gauge ferret shell tests on polar bears, Cape Churchill, Manitoba, 1984. Northwest Territories Department of Renewable Resources, Yellowknife. File Report No. 54. 40 pp
78. Derocher AE. 1984. Telemetry: comments and suggestions from the coastal grizzly project 1983. British Columbia Ministry of Environment, Wildlife Branch, Wildlife Working Report WR 3

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## Peer Review of Manuscripts

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*Acta Oecologica*  
*Animal Behaviour*  
*Animal Biotelemetry*  
*Animals*  
*Arctic*  
*Arctic Science*  
*Behavioural Ecology and Sociobiology*  
*Behavioural Processes*  
*Biological Conservation*  
*Biology Letters*  
*BMC Biology*  
*BMC Veterinary Research*

*General and Comparative Endocrinology*  
*Global Change Biology*  
*Global Ecology and Conservation*  
*Integrative Zoology*  
*International Journal of Ecology*  
*Journal of Animal Ecology*  
*Journal of Avian Biology*  
*Journal of Biogeography*  
*Journal of Fish and Wildlife Management*  
*Journal of Mammalogy*  
*Journal of Wildlife Management*  
*Journal of Zoology*

<i>Canadian Field-Naturalist</i>	<i>Mammal Review</i>
<i>Canadian Geographer</i>	<i>Marine Ecology Progress Series</i>
<i>Canadian Journal of Zoology</i>	<i>Marine Mammal Science</i>
<i>Communications Biology</i>	<i>Marine Pollution Bulletin</i>
<i>Conservation Biology</i>	<i>Nature</i>
<i>Conservation Physiology</i>	<i>Nature Climate Change</i>
<i>Diversity and Distributions</i>	<i>Nature Ecology and Evolution</i>
<i>Ecography</i>	<i>North Atlantic Marine Mammal Commission Scientific Publications</i>
<i>Ecohealth</i>	<i>Oecologia</i>
<i>Ecological Modelling</i>	<i>Oikos</i>
<i>Ecological Monographs</i>	<i>PeerJ</i>
<i>Ecology</i>	<i>PLoS Biology</i>
<i>Ecology and Evolution</i>	<i>PLoS One</i>
<i>Ecoscience</i>	<i>Polar Biology</i>
<i>Ecosphere</i>	<i>Polar Record</i>
<i>Ecosystems</i>	<i>Polar Research</i>
<i>Ecotoxicology and Environmental Safety</i>	<i>Rapid Communications in Mass Spectrometry</i>
<i>Endangered Species Research</i>	<i>Royal Society Open Science</i>
<i>Environmental Challenges</i>	<i>Sarsia</i>
<i>Environmental Conservation</i>	<i>Science</i>
<i>Environmental Pollution</i>	<i>Science Advances</i>
<i>Environmental Research</i>	<i>The Cryosphere</i>
<i>Environmental Reviews</i>	<i>Trends in Ecology and Evolution</i>
<i>Environmental Science and Policy</i>	<i>The Scientific Naturalist</i>
<i>Environmental Science and Technology</i>	<i>Ursus</i>
<i>Forestry Chronicle</i>	<i>Wildlife Biology</i>
<i>Folia Zoologica</i>	<i>Wildlife Research</i>
<i>Forest Ecology and Management</i>	<i>Wildlife Society Bulletin</i>
<i>Frontiers in Ecology and Evolution</i>	<i>Zoological Research</i>
<i>Frontiers in Ecology and the Environment</i>	

## Education

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|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1991 | Ph.D., Zoology, University of Alberta. Dissertation: Population dynamics and ecology of polar bears in western Hudson Bay.                                                      |
| 1987 | M.Sc., Zoology, University of Alberta. Thesis: The distribution and abundance of polar bears ( <i>Ursus maritimus</i> Phipps) during the ice-free period in Western Hudson Bay. |
| 1983 | B.S.F. (Honours), Forest Biology, University of British Columbia. Thesis title: A sensitivity analysis of a population model for three species of bears.                        |

## Positions Held Since Doctoral Degree

- |              |                                                                                                                                   |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 2002-present | Professor, Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada                                    |
| 1999-2002    | Section Head, Terrestrial Ecology Program, Norwegian Polar Institute, Tromsø, Norway                                              |
| 1996–2002    | Senior Research Scientist in Mammalogy Section Head of the Terrestrial Ecology Program, Norwegian Polar Institute, Tromsø, Norway |

1993-1996	Research Wildlife Ecologist, Ministry of Forests, Nanaimo, British Columbia, Canada
1993-1996	Adjunct Professor, Centre for Applied Conservation Biology, University of British Columbia, Vancouver, British Columbia, Canada
1991-1993	Biologist, Canadian Wildlife Service, Edmonton, Alberta, Canada

## Research Projects

1984-1992, 2004-present	Churchill, Manitoba: polar bears
2018-2024	Alberta: cougars
1985-1987, 1992, 2003-2024	Northwest Territories: polar bears, grizzly bears, Dall sheep, caribou, wolves
2006-2024	Nunavut: polar bears, peregrine falcons, caribou
1996-2002	Svalbard, Norway: polar bears
1988	Antarctica: seals, penguins
1983	Yukon Territory: peregrine falcons, gyrfalcons
1981-1996	British Columbia: marbled murrelets, Stone's sheep, grizzly bears, Haida Gwaii ermine, black-tailed deer

## Professional Activities

- Editor-in-Chief, *Ursus*, journal of the International Association for Bear Research and Management, 2022-ongoing
- Chair, Natural Sciences and Engineering Research Council of Canada, Northern Research Supplement Grant Committee, 2022-2023
- Co-Chair, Natural Sciences and Engineering Research Council of Canada, Northern Research Supplement Grant Committee, 2020-2022
- Editorial Board, *Arctic* (journal of the Arctic Institute of North America), 2018-ongoing
- IUCN/SSC Polar Bear Specialist Group, Member (1996-ongoing, Chair 2005-2009)
- Conservation and Science Committee of the Board of Directors of WWF-Canada (2005-2015)
- Curator of Mammalogy, Zoology Museum, University of Alberta (2003-ongoing)
- Federal-Provincial Polar Bear Technical Committee (2002-2010)
- International Association for Bear Research and Management, Council Member (2000-2007, 2 terms)
- Arctic Institute of North America, Member
- Society for Conservation Biology, Member
- Marine Mammal Society, Member
- American Society of Mammalogists, Member
- Wild Bear Advisory Committee, Polar Bears International (2004-ongoing)
- Polar Continental Shelf Project, Science Steering Committee, Natural Resources Canada (2003-2007)
- Polar Continental Shelf Project Advisory Committee, Natural Resources Canada (2004-2007)
- Associate Editor, *Wildlife Biology*, 2005-2009
- Associate Editor, *Ursus*, 2001-2003

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## Training and Mentoring

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### Post-doctoral Fellow Supervision

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1. Chloé Warret-Rodrigues Junior, 2024-ongoing. Co-supervised with James Roth, University of Manitoba.
2. Kylee Dunham, 2019-2021. Current position: Cornell Lab of Ornithology, Ithaca, NY
3. Jessica Haines, 2017-2018. Current position: Assistant Professor, MacEwan University, Edmonton, AB
4. Thea Bechshoft, 2013-2016. Current position: Research Associate, Aarhus University, Denmark
5. Nick Pilfold, 2015. Current position: Research Scientist, San Diego Zoo Conservation Research Center
6. Ane Eriksen, 2012-2014. Current position: Professor, Inland Norway University of Applied Sciences, Norway
7. Gregory Thiemann, 2010-2011. Current position: Associate Professor, York University, Toronto

### Ph.D. Supervisor

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1. Kelly Forrester, 2024-ongoing.
2. David McGeachy, 2021-ongoing.
3. Peter Thompson, 2019-2023. Statistical methods for exploring the cognitive drivers of animal movement. Current position: Post-doctoral Fellow, Simon Fraser University, BC
4. Stephen Hamilton, 2010-2022. Polar bear conservation in a period of Arctic warming. Current position: Contract Biologist, Norway
5. Amy Johnson, 2015-2020. Polar bear (*Ursus maritimus*) foraging, spatial, and energetics ecology in the changing Arctic. Current position: Research Ecologist, Ecofish Research Ltd., Courtney, BC
6. Jody Reimer, 2013- 2019. Predator and prey, past, present, and projected: Modelling polar bears and ringed seals in a dynamic Arctic. Supervised with M Lewis. Current position: Assistant Professor, University of Utah, Salt Lake City, UT
7. Barry Robinson, 2009-2015. Population demographics of peregrine falcons in Nunavut in relation to climate. Current position: Habitat Biologist, Environment and Climate Change Canada, Edmonton, AB
8. Vicki Sahanatien, 2005-2015. Polar bear (*Ursus maritimus*) habitat, space use, and movements in a seasonal sea ice ecoregion. Current position: Central Coast Indigenous Resource Alliance, BC
9. Nick Pilfold, 2010-2014. Polar bear (*Ursus maritimus*) foraging ecology in spring. Current position: Research Scientist, San Diego Zoo Global, San Diego, CA
10. Marie Auger-Méthé, 2009-2014. Supervised with M Lewis. Mathematical modelling of polar bear movement ecology. Current position: Assistant Professor, University of British Columbia, Vancouver, BC
11. Evan Richardson, 2007-2013. The mating system and life history of the polar bear. Current position: Research Scientist, Environment and Climate Change Canada, Winnipeg, MB

12. Catherine Lambert-Koizumi, 2006-2012. Dall sheep (*Ovis dalli dalli*), grizzly bear (*Ursus arctos*) and wolf (*Canis lupus*) interactions in the Northern Richardson Mountains, Canada. Current position: Executive Director, Mi'kmaq Maliseet Aboriginal Fisheries Management Association, New Richmond, QC
13. John Nagy, 2005-2011. Population ecology of caribou in northern Canada: distribution, migration, and herd structure. Current position: Private consulting biologist, Edmonton, AB
14. Peter Molnar, 2004-2009. Co-supervisor. Modelling the population dynamics and ecology of polar bears. Supervised with M Lewis. Current position: Assistant Professor, University of Toronto (Scarborough), ON
15. Mark Edwards, 2002-2009. Ecology of grizzly bears (*Ursus arctos*) in the northwestern NWT, Canada. Current position: Curator of Mammalogy, Royal Alberta Museum, Edmonton, AB
16. Seth Cherry, 2004-2010. The ecology of polar bears in relation to sea ice dynamics. Parks Canada, Ecologist Team Leader, Invermere, BC
17. Mette Mauritzen, 1996-2001. Movement patterns, habitat selection, and space use patterns of polar bears (*Ursus maritimus*) in the Barents Sea. University of Oslo. Ø Wiig, co-supervisor. Current position: Research Scientist, Marine Research Centre, Bergen, Norway

#### M.Sc. Supervisor

1. Sophie Haeubl, 2024-ongoing.
2. Simonne Tremblay, 2024-ongoing.
3. Nicholas Paroshy, 2021-2025.
4. Carter Littlefair, 2020-2023.
5. Steven Andriashek, 2020-ongoing.
6. Alexa MacPherson, 2018-withdrew.
7. Anna Jovtoulia, 2019-2025.
8. Kimberley Barrett, 2019-2023.
9. Delaney Frame, 2019-ongoing.
10. Camille Jodouin, 2019-2023.
11. Larissa Thelin, 2019-2022. Space and habitat use of polar bears (*Ursus maritimus*) in Davis Strait in relation to sea ice conditions and harp seals (*Pagophilus groenlandicus*).
12. Erin Miller, 2019-2021. Anthropogenic influence on the autumn migration of polar bears (*Ursus maritimus*) in Hudson Bay. Current position: Wildlife Biologist, Government of Alberta, Ft. MacMurray, AB
13. Sofia Karabatsos, 2018-2020. Horns and hotspots: detecting change in mountain sheep populations over large spatiotemporal scales. Current position: Conservation Coordinator, Canadian Parks and Wilderness Society, NL
14. Natasha Klappstein, 2018-2020. Energy selection functions: using energetics to inform analyses of animal movement and habitat use. Current position: Ph.D. candidate, Dalhousie University, Halifax, NS
15. Alyssa Bohart, 2016-2020. Migration dynamics of polar bears (*Ursus maritimus*) in western Hudson Bay. Current position: Polar Bear Scientist, Government of Nunavut, NU
16. Allicia Kelly, 2013-2020. Current position: Regional Wildlife Manager, Yellowknife, NT



17. Alexandra Beatty, 2016-2020. Habitat use and movement ecology of polar bears (*Ursus maritimus*) in western Hudson Bay. Current position: Wildlife Biologist, Yukon Government, Watson Lake, YK
18. Erin Henderson, 2016-2020. Polar bear (*Ursus maritimus*) use of the western Hudson Bay flaw lead polynya. Current position: Research Assistant, Parks Canada, AB
19. Brooke Biddlecombe, 2017-2019. Using spatial autocorrelation to quantify the effects of sea ice fragmentation on polar bear movement in Hudson Bay. Current position: Biologist, Environment and Climate Change Canada.
20. Corey Smereka, 2017-2019. Space use dynamics and habitat selection of cougars in west-central Alberta, Canada. Current position: Wildlife Biologist, AB Government, Stony Plain, AB
21. Nicole Boucher, 2016-2019. monitoring ecosystem dynamics in the beaufort sea using stable isotopes in polar bears (*Ursus maritimus*) and ringed seals (*Pusa hispida*). Current position: Ph.D. candidate, University of Victoria, BC
22. Sean O'Donovan, 2015-2018. Intrapopulation variability in wolf diet revealed using a combined stable isotope and fatty acid approach. Current position: Wildlife Biologist, Government of British Columbia, Kamloops, BC
23. Justin Shave, 2016-2018. Diet composition and prey selectivity of gray wolves (*Canis lupus*) in Prince Albert National Park, Saskatchewan. Current position: Advisian, WorleyParsons Canada Ltd., Calgary, AB
24. Ron Togunov, 2014-2016. Windscares and olfactory foraging among polar bears (*Ursus maritimus*). Current position: Post-doctoral fellow, Norwegian University of Science and Technology, Trondheim, Norway
25. Patrick Mislán, 2011-2015. Microanalysis of isotopes to assess polar bear ecology in western Hudson Bay. Current position: private consultant, ON
26. Michelle Viengkone, 2012-2015. Population structure and space-use of polar bears (*Ursus maritimus*) in Hudson Bay. Co-supervised with Dr. Corey Davis. Current position: rehabilitation physiotherapist
27. Jodie Pongracz, 2009-2014. Polar bear habitat use in the Southern Beaufort Sea. Current position: Carnivore Biologist, Yukon Government, Whitehorse, YK
28. Alysa McCall, 2010-2013. Polar bear habitat use in western Hudson Bay. Current position: Director of Conservation Outreach for Polar Bears International, Yellowknife, NT
29. Laura Castro de la Guardia, 2010-2012. (supervised with Paul Myers Earth and Atmospheric Sciences). Predictive modelling of polar bear sea ice habitat in the Hudson Bay ecosystem. Current position: Post-doctoral fellow, Norwegian Polar Institute, Tromsø, Norway
30. Oliver Barker, 2007-2011. Grizzly bear and Arctic ground squirrel relationships. Current position: Fisheries Biologist, Fisheries and Oceans Canada, Whitehorse, YK
31. Sarah Medill, M.Sc. 2006-2008. Reconstructing life histories using cementum: information recorded in premolars of polar bears (*Ursus maritimus*). Current position: Parks Ecologist, NS
32. Conrad Thiessen, 2003-2006. Dispersal of wolves in the Central Rockies. Current position: Regional Biologist, BC Ministry of Environment, Smithers, BC
33. Lindsay Towns, 2003-2006. Long-term patterns of polar bear distribution in western Hudson Bay. Current position: The Fauna Foundation, Montréal, QC
34. Emily Parks, 2003-2005. Habitat use of female polar bears in Hudson Bay relative to climate change. High school teacher, Halifax, NS

## Undergraduate Supervisor

1. Brynne Klein, 2024-ongoing
2. Simonne Tremblay, 2023-2024
3. Sam Reimer, 2023-2024
4. Hope Goerz-Ledwos, 2022-2023
5. Arya Horon, 2021-2022
6. Caitlan Morganson, 2020-2021
7. Gary Elaschuk, 2020-2021
8. Claudia Gauk, 2019-2020
9. Steven Andriashek, 2019-2019
10. Taylor Boyd, 2018-2019
11. Keenan Guillas, 2018
12. Morgan Dobroski, 2017-2018
13. Sarah Heemskerk, 2017-2018\*
14. Natasha Klappstein, 2017-2018\*
15. Aaron Moizis, 2017-2018
16. Brooke Biddlecombe, 2016-2017\*
17. Meredith Yee, 2015-2016\*
18. Linda Nguyen, 2015-2016\*
19. Alexandra Beatty, 2015-2016
20. Corey Smereka, 2014-2015\*
21. Kerri Krawchuk, 2012-2013
22. Kristen Peck, 2012-2012
23. Sean Haughian, 2004-2005
24. Sarah Downey, 2004-2005

\* senior authored a peer-reviewed paper from their research project

## Research Support

2019-2030	NSERC Discovery - \$420,000
2019-2030	NSERC Northern Supplement - \$210,000
2022-2026	San Diego Zoo Global - \$300,000
2020-2025	Polar Continental Shelf Project - \$
2021-2026	Polar Bears International - \$125,000
2021-2027	Environment and Climate Change Canada - \$350,000
2021-2023	Environment and Climate Change Canada - \$122,000
2020-2021	WWF Canada - \$15,000
2019-2021	MITACS - \$120,000
2019-2020	The Ocean Foundation - \$5,000
2009-2025	Polar Bears International - \$800,000
2019-2025	San Diego Zoo Global - \$150,000
2013-2021	Environment and Climate Change Canada - \$525,000
2017-2012	Faculty of Science Research Fellowship - \$100,000
2008-2019	World Wildlife Fund Canada - \$390,000
2018-2019	Alberta Conservation Association - \$8,000
2004-2019	Polar Continental Shelf Project - \$800,000
2008-2015	ArcticNet - \$260,000
2002-2018	NSERC Discovery, Northern Supplement, RTI - \$843,075
2008-2009	NSERC International Polar Year - \$15,000

2014-2015	Pittsburgh Zoo and PPG Aquarium - \$3,000
2014-2015	Kansas City Zoo - \$5,000
2012-2014	Hauser Bears - \$30,000
2013-2014	Aquarium du Québec Conservation Fund - \$3,000
2010-2015	Quark Expeditions - \$100,000
2008-2011	Canadian Wildlife Federation - \$70,000
2004-2013	U.S. Department of the Interior - \$1,300,000
2004-2007	Government of the Northwest Territories - \$60,000
2002-2019	Northern Science Training Program - \$135,000

#### Selected Notable Lectures

2019	Thompson Rivers University, Public Presentation
2018	International Association for Bear Research and Management, Public Presentation – Ljubljana, Slovenia
2018	One Health Conference, Stanford University, Palo Alto, California
2016	Annual Paul L. Errington Memorial Lecture, Iowa State University, Ames, Iowa
2014	The 13 <sup>th</sup> Leading Special Lecture, Hokkaido University, Sapporo, Japan
2014	International Conference on Animal Care, Kobe, Japan
2013	Bellarmine University, Louisville, Kentucky
2012	Departmental Lecture, Brigham Young University, Provo, Utah
2012	Oceanographic Institute, Paris, France
2011	Dennis H. Chitty Lecture, University of British Columbia, Vancouver, BC
2011	Aarhus University, Aarhus, Denmark
2011	Wildlife Disease Society Keynote, Québec City, QC

#### Selected Media Interviews

<i>Alaska Public Radio</i>	<i>Mother Jones Magazine</i>
<i>Arctic Deeply</i>	<i>National Geographic</i>
<i>Australian Broadcasting Corporation</i>	<i>National Post</i>
<i>BBC 2</i>	<i>Nature News</i>
<i>BBC Radio 1</i>	<i>NBC News</i>
<i>BBC Wildlife</i>	<i>New Scientist</i>
<i>Buzzfeed</i>	<i>New York Times</i>
<i>Canadian Geographic</i>	<i>Nunutsiaq News</i>
<i>Carbon Brief</i>	<i>Poland Radio 1</i>
<i>CBC North</i>	<i>Radio Canada International</i>
<i>CBC Quirks and Quarks</i>	<i>Radio Slovenia</i>
<i>CBC The Current</i>	<i>Science News</i>
<i>Charles Adler Radio Show</i>	<i>Slate</i>
<i>CNN</i>	<i>Southern California Public Radio</i>
<i>CTV Alberta Primetime</i>	<i>The Atlantic</i>
<i>Edmonton Journal</i>	<i>The Guardian</i>
<i>Globe and Mail</i>	<i>The Observer</i>
<i>Hakai Magazine</i>	<i>The Times of London</i>

*Inside Climate News*  
*Iowa Public Radio*  
*Le Soleil*  
*Los Angeles Times*  
*Macleans*

*Toronto Star*  
*Up Here Magazine*  
*Washington Post*  
*WFPL Radio Kentucky*  
*Winnipeg Free Press*