
HELEN DAVIS, R.P.Bio.

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PROFESSIONAL AND ACADEMIC QUALIFICATIONS

REGISTERED PROFESSIONAL BIOLOGIST, College of Applied Biology (British Columbia)

MASTER OF SCIENCE in Biological Sciences, Simon Fraser University, Burnaby, BC, 1996

BACHELOR OF SCIENCE in Animal Biology, University of British Columbia, Vancouver, BC, 1992

- Representative of the College of Applied Biology for a Species At Risk Task Force (2009)
- Public representative on BC Hydro's Fish and Wildlife Compensation Program-Coastal board
- Member of the *jeffersonii* Badger Recovery Team and Communication/Extension Recovery Implementation Group
- Past member of the *macfarlanei* Screech-Owl Recovery Team
- "Reliability" clearance with Canadian Industrial Security Directorate

SUMMARY OF EXPERIENCE

My career as a Registered Professional Biologist has focussed on developing and implementing conservation programs for a wide variety of wildlife, concentrating primarily on research and conservation of black bears, grizzly bears, and species at risk.

Much of my work has focused on developing and implementing conservation programs for different species at risk. I have conducted multi-year research projects on both badgers and western screech-owls as well as Resources Information Standards Committee-compliant surveys for Great Basin spadefoots, gopher snakes, western rattlesnakes, western screech-owls, and badgers. Much of the species at risk work that I have completed has been for First Nations' clients.

I have also participated in various habitat modelling exercises for wildlife. I have assisted in the development of predictive models for bears, badgers and western screech-owls and been a member of a team of species experts reviewing co-location scenarios for old growth reserve areas for coastal BC.

I have considerable experience successfully initiating, generating funding for, and completing many large-scale projects and have produced both peer-reviewed publications as well as informative publications for the public from these projects. Creating effective extension and communication strategies that help achieve conservation goals has been a particular emphasis of my work.

I have extensive field experience including ecosystem assessments, invasive weed management, population inventory, the capture, immobilization and handling of live animals, and ground and aerial radiotelemetry. I am able to identify numerous plants and I am proficient at using various methods of habitat assessment and measurement, particularly the BC biogeoclimatic ecosystem classification system.

RELEVANT EXPERIENCE

Most of the following projects have been conducted as a Senior Biologist with Artemis Wildlife Consultants, where I am a founding partner.

2011-2013: **Biologist** creating and mapping zoology element occurrences for species at risk across BC for the Conservation Data Centre. Utilized NatureServe methodologies, Biotics Mapper and Tracker.

2012-2013: **Species Specialist** researching the ecology of decay in tree species used by wildlife. In partnership with Ministry of Environment and Forests, Lands and Natural Resource Operations.

2010-2011: **Lead Biologist** revisiting dens used by black bears in the Nimpkish Valley in 1992-1995. Resulting manuscript on the longevity and reuse of dens published in the Journal of Wildlife Management. Funded by the Habitat Conservation Trust Foundation.

2010: **Lead Negotiator** between the BC Ministry of Environment and local governments (municipal, city, regional district) to protect habitat of species at risk through stewardship agreements. Four were signed.

2010: **Species Expert/Advisor** compiling and synthesizing information on bear-viewing practices and

operations throughout BC and Alaska to advise BC Parks on options for managing bear viewing in Tweedsmuir Provincial Park.

2009-2010: **Consultant:** soliciting, compiling and summarizing information to identify priority wildlife species for program investments in various coastal watersheds. Consulted with partner agencies (MOE, Environment Canada). Attended public and First Nations consultation meetings for watershed planning. Drafted a Grizzly Bear Action Plan. Conducted for the Bridge Coastal Restoration Program (now FWCP-coastal).

2009: **Lead Biologist** initiating and conducting a research project on habitat use by Great Basin spadefoots (COSEWIC Threatened species) in grasslands on the Okanagan Indian Band's IR#1. Funded by the Interdepartmental Recovery Fund.

2008-2009: **Domain Expert** for American black bears for a MARXAN modelling project to identify overlap between the old-growth habitat requirements of focal species to optimally select old growth reserve areas at the landscape scale. Conducted for the Ecosystem Based Management Working Group.

2007-2008: **Lead Biologist** developing a bear-viewing strategy for the Kitasoo Spirit Bear Conservancy and surrounding area (2007) and Owikeno Conservancy and surrounding area (2008). Developed rationale for the spatial and temporal extent of viewing in newly created Conservancies. Conducted for BC Parks.

2005-2008: **Principal Investigator** for inventory, research, and extension program aimed at conserving western screech-owls (COSEWIC Threatened species) along the Shuswap River. Responsible for developing objectives and all aspects of project coordination and implementation, including preparation of successful funding applications. Project funded by Bridge Coastal Restoration Program, Habitat Stewardship Program, and the Forest Science Program of the Forest Investment Account.

2005-2008: **Project Co-leader** for species at risk surveys. Conducted RISC-compliant presence/not detected inventories of Great Basin spadefoots, western rattlesnakes, Great Basin gopher snakes, western screech-owls, and North American badgers for the Okanagan Indian Band, Vernon, BC. Secured funding from the Interdepartmental Recovery Fund.

2005: **Project Coordinator** for Sensitive Ecosystem Inventory of the Vernon Commonage. Conducted landowner contact program. Coordinated working group composed of community groups, local government, First Nations, and educational

institutions. Conducted for the Allan Brooks Nature Centre.

2004-2007: **Project Co-leader** for species at risk surveys. Conducted RISC-compliant presence/not detected inventories of Great Basin spadefoots, Great Basin gopher snakes, western screech-owls, and American badgers for the Spallumcheen Indian Band, Enderby, BC. Secured funding from the Interdepartmental Recovery Fund.

2003: **Lead Biologist** on project examining the habitat ecology of American black bears in coastal environments. Project involved analysis of habitat and spatial data collected during the Nimpkish Black Bear Study. Developed predictive habitat model and published manuscript in peer-reviewed journal. Conducted for Canadian Forest Products Ltd.

1999-2004: **Extension Specialist** for Thompson-Okanagan Badger Project. Responsible for developing extension priorities for conservation strategies, conducting target group consultation, production of extension materials, and project delivery.

2001: **Project Leader** developing implementation guidelines for "Bear Smart" status for communities in British Columbia. Project involved researching and synthesizing methods for reducing human-bear conflicts, developing criterion for "Bear Smart" status, and preparation of final published document. Completed for the Ministry of Environment, Lands and Parks.

1998: **Field Technician:** Caribou, moose and wolf surveys in the Williston Reservoir area. Conducted for Wildlife Infometrics Inc. Mackenzie, BC.

1996: **Field Technician:** Radio-tracking barren-ground grizzly bears and conducting follow-up habitat assessments, wolf den and caribou enumeration surveys in the Northwest Territories. Conducted for Rescan Environmental Services Ltd.

1992-1995: **Project Biologist** for Nimpkish Black Bear Study. Responsible for all aspects of the denning portion of the study design, data collection, analysis and reporting. Also responsible for immobilization, radio-collaring, and monitoring of bears, habitat classification and description, behavioural data collection, plant identification, and forestry interpretations. Conducted for the Ministry of Environment, Lands and Parks, Victoria, BC.

SELECTED REPORTS & PUBLICATIONS

- Davis, H., A. N. Hamilton, A. S. Harestad and R. D. Weir. 2012. Longevity and reuse of black bears dens in managed forests of coastal British Columbia. *Journal of Wildlife Management* 76:523-527.
- Davis, H. 2009. Proposed bear-viewing strategy for the Owikeno Conservancy and surrounding area. BC Parks, Hagensborg, B.C.
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- Davis, H. 2008. Proposed bear-viewing strategy for the Kitasoo Spirit Bear Conservancy and surrounding area. BC Parks, Hagensborg, B.C.
- Davis, H. and R. J. Cannings. 2008. Diet of western screech-owls in the interior of British Columbia. *British Columbia Birds* 18:19-22.
- Davis, H. and R. D. Weir. 2010. Home ranges and spatial organization of western screech-owls in southern British Columbia. *Northwestern Naturalist* 91:157-164.
- Davis, H., and R. D. Weir. 2008. Western screech-owl conservation along the Shuswap River. Artemis Wildlife Consultants, Armstrong, B.C.
- Davis, H., R. D. Weir, A. N. Hamilton, and J. A. Deal. 2006. Influence of phenology on site selection by female American black bears in coastal British Columbia. *Ursus* 17:41-51.
- Davis, H., D. W. Wellwood, and L. M. Ciarniello. 2002. "Bear Smart" Community Program: background report. British Columbia Ministry of Environment, Lands and Parks, Victoria, British Columbia.
- Davis, H., and R. D. Weir. 2002. Restoration of IDFxh grasslands in the Clcahl traditional territory of the Splits'in people. Prepared for Spallumcheen Indian Band, Enderby, B.C.
- Davis, H. 1996. Characteristics and selection of winter dens by black bears in coastal British Columbia. M.Sc. Thesis. Simon Fraser University, Burnaby, B.C.
- Davis, H., and A. S. Harestad. 1996. Cannibalism by black bears in the Nimpkish Valley, British Columbia. *Northwest Science* 70:88-92.
- Cannings, R. J., and H. Davis. 2007. Status of the western screech-owl *macfarlanei* subspecies (*Megascops kennicottii macfarlanei*) in British Columbia. BC Ministry of Environment. Wildlife Working Report No. WR-112. Victoria, B.C.
- Horn, H. L., P. Arcese, K. Brunt, A. Burger, H. Davis, F. Doyle, K. Dunsworth, P. Friele, S. Gordon, A. N. Hamilton, G. MacHutchon, T. Mahon, E. McClaren, V. Michelfelder, B. Pollard, G. Sutherland, S. Taylor, L. Waterhouse. 2009. Part 3: knowledge base for focal species and their habitats in coastal B.C. Report 3 of the EBM Working Group Focal Species Project. Integrated Land Management Bureau, Nanaimo, B.C.
- MacHutchon, A. G., S. Himmer, H. Davis, and M. Gallagher. 1998. Temporal and spatial activity patterns among coastal bear populations. *Ursus* 10:539-546.
- Weir, R.D., H. Davis, and C.S. Hoodicoff. 2003. Conservation strategies for North American badgers in the Thompson and Okanagan Regions. Final report for the Thompson-Okanagan Badger Project. Artemis Wildlife Consultants, Armstrong, B.C.
- Weir, R. D., H. Davis, C. S. Hoodicoff, and K. W. Larsen. 2005. Life on a highway: Sources of mortality within an endangered British Columbian badger population. *In* T.D. Hooper, technical editor. Proceedings of the Species at Risk 2004 Pathways to Recovery Conference. March 2–6, 2004, Victoria, B.C.

COMMUNITY WORK

To encourage up-and-coming biologists, I am a founding member of the Armstrong-Spallumcheen Environmental Trust (ASET). ASET is a non-profit group that raises funds for a yearly bursary for Armstrong-Spallumcheen high-school students who have demonstrated an interest in environmental issues and who are furthering their studies in an environment-based field.

To ensure that species at risk are considered in local area planning, I was a volunteer member of the Environmental Policy and Natural Lands Working Group that developed goals, objectives, strategies and policy recommendations that were considered for inclusion in the Regional Growth Strategy for the Regional District of North Okanagan.

I coordinated a successful conservation covenant on private land utilized by a species at risk (western screech-owl). I initiated and assisted in getting funding to pay for the covenant for the landowner.

CERTIFICATES

- OFA Level 1 First Aid with Transportation Endorsement (includes CPR)
 - Snowmobile Operators Course
 - Firearms Licence
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