

Robert Houtman
Ph.D., B.Sc.

S.A.F.E.
Department of Fisheries and Oceans
Pacific Biological Station, Nanaimo, B.C.

Tel: (250) 729-8385
Email: rob.houtman@dfo-mpo.gc.ca

Experience:

Catch Monitoring Biologist, Fisheries and Oceans, Nanaimo 2002-Present

My responsibilities have included:

- Improving cwt head recovery in commercial salmon fisheries,
- Leading a project to assemble official final salmon catch estimates for the period 1996-04
- Data quality control for salmon catch data in FOS,
- Survey design advice for age sampling, CWT sampling, and catch rate sampling,
- Contributing to regional Fishery Monitoring Review committees,
- Design and executing a study of the efficacy of “wands” (handheld, electronic, cwt detectors).

Stock Assessment Biologist, Fisheries and Oceans, New Westminster 1997-2002

My major responsibility has been the design, analysis and reporting of mark-recapture studies on Fraser River sockeye (*Oncorhynchus nerka*) and pink (*Oncorhynchus gorbuscha*). In particular, I have:

- Assisted with the design and supervised the analysis of 1998-2000 field studies,
- Completed comprehensive analyses of several mark-recapture studies,
- Written several Manuscript Reports describing these studies,
- Modified field and analytical methods used by Fraser River Division-Stock Assessment,
- Designed and implemented a computer program to make analysis of mark-recapture data more rapid and error-free, in collaboration with Keri Benner,
- Supervised technicians collecting and analyzing mark-recapture data,
- Begun to program a bootstrapping program (in Visual Basic) that will calculate the precision of mark-recapture estimates, including several sources of uncertainty which are ignored in current estimates.
- Designed and conducted a field study to determine whether disk-tag color influenced recovery probability, a potential source of bias in mark-recapture studies.

I have also served on committees examining estimates of spawning escapement and *en route* mortality, as part of the 1998 post-season review process, and on a committee responsible for approving and funding selective fishing projects on the Fraser River.

Visiting Researcher, Okanagan University College, Kelowna 1996-97

In collaboration with Dr. Bob Lalonde, I conducted experiments examining egg-laying decisions of parasitoid wasps and feeding ecology of antlions.

Sessional instructor, University of Northern British Columbia & Bamfield Marine Station, Prince George and Bamfield 1995-1997

I taught introductory biology, animal behavior and behavioral ecology, both individually and with a partner. I also supervised research projects of undergraduate students.

Graduate Student, Simon Fraser University, Burnaby 1988-95

My thesis consisted of theoretical and experimental research on juvenile coho salmon (*O. kisutch*) and tidepool sculpins (*Oligocottus maculosus*), examining the influence of predation risk on foraging behavior of cryptic animals. This project included the design, budget estimation, organization, conduct, analysis and reporting of field and lab studies. For these studies, I also selected and supervised field crews. As well, several of these studies involved collecting and processing of various types of biological samples.

- Visiting Researcher, Leiden University, Netherlands** 1993
In collaboration with Dr. Jacques van Alphen, I developed a predictive model of parasitoid wasp patch defense behavior.
- Field Biologist, Triton Environmental Consultants, Richmond** 1987-88
I conducted an experiment to determine the influence of suspended sandblasting sand on coho salmon, and assisted with a Chinook salmon 'egg-take' for the Shuswap hatchery.
- Research Assistant, S.F.U., Burnaby** 1985, 1987
I designed and ran behavioral experiments on cichlid fish, water striders, caprellid amphipods and Gray squirrels for Dr. Larry Dill.
- Field assistant, University of British Columbia, Vancouver** 1986
I assisted Dr. Walt Klenner with a radio-tracking study of Douglas red squirrel habitat use in winter, near 100-Mile House.
- Field Biologist, MacMillan-Bloedel Ltd., Nanaimo** 1986
I conducted a field study and wrote a report on the effects of logging activity on the selection of calving sites by Roosevelt elk, near Campbell River.
- Research Assistant, Agriculture Canada, Summerland** 1981-84
I conducted field experiments comparing different methods of controlling the asparagus aphid in the Okanagan valley for Dr. Bob Vernon.

Professional Development/ Activities:

- Training courses** 2000-
2001
I have completed Management Development I, Early Conflict Resolution and First Aid.
- Referee** 1998-Present
I have refereed submissions to North American Journal of Fisheries Management, Behavioral Ecology and PSARC.
- Workshop participant, Pacific Biological Station, Nanaimo** 1998
Recent developments in the analysis of mark recapture experiments, by Dr. Carl Schwarz, and assessment of optimum exploitation rates and spawning stock size, by Dr. Carl Walters.
- Conference coordinator, Pacific Ecology Conference, B.M.S.** 1994
I planned, organized and coordinated a conference for 120 ecology graduate students of the Pacific Northwest.
- Member, Evolutionary biologist hiring committee, S.F.U.** 1991
I served as the graduate student representative.

Conference presentations

2009. Commercial Fishers Monitoring Stock Composition: Biological Sampling by British Columbia Salmon Trollers. International Fisheries Monitoring and Observer Conference, Portland.
2007. Rapid availability of commercial salmon catch reports from fishing grounds, via web-based data-entry by call-center staff. International Fisheries Observer Conference, Victoria.
1998. Co-authored with Dr. Bob Lalonde and Jeff Niehaus: What to do when your offspring may have to compete for food and mates? Some experiments with *Nasonia vitripennis*. International Society for the study of Evolution, Vancouver.

1998. Co-authored with Linc Smith: When to stop hiding and start feeding: an investigation of proximate mechanisms underlying the return to normal activity after an alarm response in tidepool sculpins (*Cottidae: Oligocottus maculosus*). Canadian Society of Zoologists, Kelowna.
1994. The influence of predation risk on diet selectivity: the importance of prey characteristics. Evolution, Ecology, and Ethology of Fishes, Victoria.
1993. How risky is it? A Bayesian-updating model of how animals assess the probability that a predator is present. Animal Behavior Society, Davis, California.
1993. Tidepool sculpins alter their response to predator detection with substrate match. 14th Annual Pacific Ecology Conference, Bamfield.

Education:

Ph.D. in Biology (Behavioral Ecology), S.F.U. 1988-95

- *Supervisor:* Dr. Larry Dill.
- *Thesis title:* The influence of predation risk on the within-patch foraging decisions of cryptic animals.

B.Sc. in Biology, S.F.U. 1980-86

Scholarships:

President's Research Stipend, S.F.U.	1994
Bamfield Marine Station Graduate Student Award.	1991
Dr. F.A. Linville Institute in Sensory Research, S.F.U.	1989-90
S.F.U. Graduate Fellowships.	1988-90

Extra-curricular Activities:

Volleyball, floor hockey, soccer, backpacking, fishing, climbing, and home brewing.

References: Provided on request

Refereed Publications:

- Houtman, R. and L.M. Dill. 1998. The influence of predation risk on diet selectivity: a theoretical analysis. *Evolutionary Ecology* **12**: 251-262.
- Houtman, R., L. Paul, R. Ungemach and R.C. Ydenberg. 1997. Feeding and predator avoidance by the Rose Anemone (*Urticina piscivora*). *Mar. Biol.* **128**: 225-230.
- Houtman, R. and L.M. Dill. 1994. The influence of substrate color on the alarm response of tidepool sculpins (*Oligocottus maculosus*; Pisces, Cottidae). *Ethology* **96**: 147-154.
- Dill, L.M. and R. Houtman. 1989. The influence of distance-to-refuge on flight initiation distance in the Gray squirrel (*Sciurus carolinensis*). *Can. J. Zool.* **67**: 233-235.
- Vernon, R.S. and R. Houtman. 1983. Evaluation of sprayed and granular aphicides against the European Asparagus Aphid, (*Brachycolus asparagi*), (Homoptera: Aphididae), in British Columbia. *J. Entomol. Soc. Brit. Columbia* **80**: 3-9.

Non-refereed publications:

- DFO. 2009. Revisions to the official DFO commercial Pacific salmon catch estimates for 1996-2004. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2009/xxx
- MacDonald, J.S., M.G.G. Foreman, T. Farrell, I.V. Williams, J. Grout, A. Cass, J.C. Woodey, H. Enzenhofer, W.C. Clarke, R. Houtman, E.M. Donaldson, and D. Barnes. 2000. The influence of extreme water temperatures on migrating Fraser River sockeye salmon (*Oncorhynchus nerka*) during the 1998 spawning season. *Can. Tech. Rep. Fish. Aquat. Sci.* 2326: 117 p.
- Houtman, R. and B.P. Fanos. 2000. Estimation of the 1995 late run sockeye salmon (*Oncorhynchus nerka*) escapement to the Adams River study area. *Can. Manuscr. Rep. Fish. Aquat. Sci.* 2533: 73 p.
- Houtman, R., J.A. Tadey, and N.D. Schubert. 2000. Estimation of the 1995 Birkenhead River sockeye salmon (*Oncorhynchus nerka*) escapement. *Can. Manuscr. Rep. Fish. Aquat. Sci.* 2534: 39 p.
- Houtman, R. and T.E. Cone. 2000. Estimation of the 1995 Horsefly River system sockeye salmon (*Oncorhynchus nerka*) escapement. *Can. Manuscr. Rep. Fish. Aquat. Sci.* 2535: 45 p.
- Houtman, R. and N.D. Schubert. 2000. Estimation of the 1995 Seymour River sockeye salmon (*Oncorhynchus nerka*) escapement. *Can. Manuscr. Rep. Fish. Aquat. Sci.* 2536: 41 p.
- Schubert, N. and R. Houtman. In prep. Estimation of the 1998 Fraser River sockeye salmon (*Oncorhynchus nerka*) escapement. *Can. Tech. Rep. Fish. Aquat. Sci.*
- Houtman, R. 1986. The effects of logging activity on Roosevelt elk calving site selection. Land Use Planning Advisory Team, MacMillan Bloedel Ltd., Nanaimo, B.C.