

Centre for Coastal Health

Annual Report 2001-2002

*Integrating
human, animal
and environmental
health since 1996*

Director

Craig Stephen DVM PhD

Senior Scientist

Erin Sifton BSc DVM MSc

Centre for Coastal Health
900 5th Street
Nanaimo, BC
Canada V9R 5S5

Phone: (250) 740-6366
Fax: (250) 468-1585

E-mail: cch@mala.bc.ca

Website:
www.mala.bc.ca/www/cch

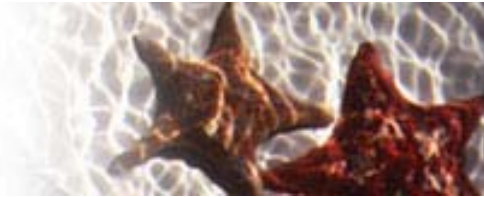
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Director's Message

I am pleased and proud to present this year's annual report. The report serves as a brief overview of the major activities of the CCH. It does not capture the many auxiliary and additional roles the members of our expanding network play in health sciences in Canada. Instead, the report gives you a feeling for the experience we gained this year as well as illustrating how the CCH turns its projects into high quality work that contributes to health sciences and decision making.

The influence and reputation of the CCH is built on the foundation of our collaborators and supporters across Canada and elsewhere. I'd like to take this chance to thank all those people who have served as advocates for the CCH and our mission. Without these people, our reputation would have been slower to grow. The high calibre of people in our network has done much to re-enforce the message that the Centre's activities are of value to the community.

Increasingly, the "one health" message of the CCH is finding receptive ears. We have strived to send this message out through a variety of media. The scientific press and meetings are still a major conduit for the CCH's products. However, education also plays a major role. This year saw a wide range of educational efforts ranging from



traditional university-level classes to special workshops for youth and collaborations with popular media. Each of these efforts was successful in expanding people's appreciation of the fact that the health of organisms is inter-related.

Our goals for next year are two-fold. First, we have the pragmatic role of working to find solutions to health issues that "fall between the cracks" of many government and academic programs in Canada. Second, we are going to increase our ongoing efforts to fill those cracks. Canada lacks training and management programs that examine health at the borders of people and animals and the environment. A major part of our strategic plan for next year is to find ways to initiate sustainable programs in veterinary public health, population health for fish and wildlife and an integrated view to environmental health. We hope to not only have the benefit of those efforts felt at the CCH, but also that there be a ripple effect which expands similar efforts at other institutions.

Board of Directors

Craig Stephen DVM PhD (President and Director)

Carl Ribble DVM MSc PhD (Vice-President)
Professor and Chair—Population Medicine
Ontario Veterinary College

Rick Mathias MD FRCPC (Secretary Treasurer)
Professor—Health Care and Epidemiology
University of British Columbia

Bill Eaton MSc PhD
Senior Vice President
Penninsula College

Ray Copes MD MSc FRCPC
Medical Specialist—Risk Assessment &
Toxicology
BC Ministry of Health Services

Major Projects

Management Projects

Epidemiological services to the BC Ministry of Agriculture, Fisheries in Food for the Fish Health and Food Safety Divisions.

Research Planning

Recommendations for future directions in fish health for the Great Lakes Fishery Commission

Risk Assessments

Risks of translocating Chronic Wasting Disease to Ontario with elk movements from Alberta

Risks to wildlife from backcountry use of camelids in BC

Necropsies of wildlife for evidence of toxin exposure and other anthropogenic impacts

Outbreak Investigations

Multispecies outbreak of *Cryptococcus* on southern Vancouver Island

Surveillance

Rabies surveillance in Canada

West Nile Surveillance in Canada

Medicated feed sales in BC

Fish disease surveillance for BC

Incorporating animal disease data into public health: Needs and opportunities

Education

United Nations Children's Conference on the Environment—Workshop on food, water and health

Risk Assessment course for the Great Lakes Commission

Undergraduate courses in Fish Health and Microbial Ecology

Graduate lectures in outbreak investigation

Public education via media interviews and participation in a Discovery Channel documentary

Project Collaborators

Individuals

Dr. Meg Thorburn

Dr. Helen Schwantje

Dr. Xiaoyan Jia

Dr. Grace Karreman

Dr. Murray Fyfe

Dr. Carl Ribble

Dr. Mark Sheppard

Dr. Kent Gustavson

Organizations

Ontario Veterinary College

Health Canada

Department of Fisheries and Oceans

BC Ministry of Water, Land and Air Protection

BC Centre for Disease Control

Canadian Cooperative Wildlife Health Centre

Great Lakes Fishery Commission

Research Assistants and Students

Research Assistants

Dr. Sandor Juhasz

Dr. Holly Tilosten

Graduate Students

Dr. Sue Sanders

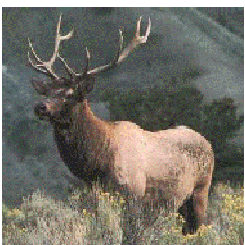
Dr. Melissa McLaws

Undergraduate Students

Julie Newall



CCH attracted over \$300,000 in research grants and contracts in this past fiscal year. Funders included: Health Canada, Great Lakes Fishery Commission, Canadian Cooperative Wildlife Health Centre, BC Centre for Disease Control, BC Habitat Conservation Fund, Muskwa-Kechika Management Area Fund; and BC Ministry of Agriculture, Fisheries and Food.



Scientific Publications

Nishi JS, Stephen C, Elkin BT. (2002). Implications of agriculture and wildlife policy on management and eradication of bovine tuberculosis and brucellosis in free ranging Wood Bison in northern Canada. In *The Domestic Animal/Wildlife Interface: Issues for Disease Control, Conservation, Sustainable Food Production, and Emerging Diseases* edited by E. Paul J. Gibbs and Bob H. Bokma. *Annals of the New York Academy of Sciences*. 969: 1-9.

Sophie St-Hilaire, Carl S. Ribble, Craig Stephen, Eric Anderson, Gael Kurath, and Micheal L. Kent. (2002- in press) Epidemiological investigation of infectious hematopoietic necrosis virus in salt water net-pen reared Atlantic salmon in British Columbia, Canada. *Aquaculture*

Stephen, C, Pearce, MR, Bender, C. 2001. Human health effects of aerial spraying of *Bacillus thuringiensis kurstaki*-based biological pesticides - A review of observational data and overview of surveillance conducted in Victoria, British Columbia, Canada 1999. *Environmental Health Review*. October.

Conference Presentations

Stephen C. 2002. Challenges of interdisciplinary research. Health Canada Workshop on Climate Change and Infectious Diseases. Vancouver, BC.

Stephen C, Bruneau N. 2002. Professional Continuing Education. 2-day workshop on Risk Assessment. Great Lakes Fishery Commission. Minneapolis MN.

Stephen 2001. Fish health management. Salmon farming and the Northcoast; Prince Rupert Aquaculture Forum. Prince Rupert BC. Oct 20.

Stephen C. 2001. Animals as indicators of public health risks : BC and historical examples. Symposium on zoonotic and communicable diseases. UBC Centre for Disease Control. Vancouver.

Raverty, S, Stephen, C. 2002. *Brucella* antibodies in marine mammals in British Columbia. 57th International Conference on Diseases in Nature Communicable to Man. Vancouver August 10-13.

Fyfe M, MacDougall L, Bartlett K, Romney M, Starr M, Pearce M, Stephen C et al. 2002. *Cryptococcus conundrum*: Why is a tropical environmental fungus causing disease on Vancouver Island, Canada. 57th International Conference on Diseases in Nature Communicable to Man. Vancouver August 10-13.

Stephen, C, Ribble, CS. (2001). Death, Disease and Deformity: Using Outbreaks of Disease in Animals as Sentinels for Emerging Environmental Health Risks. *Global Change and Human Health*. 2(2): 108-117

Raverty S, Stephen C, Fiessel W, Carlsen K. 2001. A preliminary microbiological and serological investigation into *Brucella* spp in neonatal and juvenile Harbour seals (*Phoca vitulina richardsi*) presented to the Vancouver Aquarium Marine Mammal Centre and Saltspring Island Wildlife Recovery Care Centre. *BC Animal Health Newsletter Diagnostic Diary*. 11(2): 13-14

Stephen, C, Lester S, Black W, Fyfe M, Raverty S(2002) Multi-species outbreak of cryptococcosis on Southern Vancouver Island, British Columbia. *Canadian Veterinary Journal* (in press).



Stephen C, Raverty S, Lester S, Black W, Fyfe M. 2002. Multi-species outbreak of cryptococcosis on Southern Vancouver Island. 57th International Conference on Diseases in Nature Communicable to Man. Vancouver August 10-13.

Stephen C, Ribble CS. 2002. Death, Disease and Deformity: Outbreaks of animal disease as sentinels for emerging human health risks. 57th International Conference on Diseases in Nature Communicable to man. Vancouver August 10-13.

Sifton E, Stephen C, Bowie W, Wetzstein M. 2002. Summary of animal antimicrobial use in British Columbia. 57th International Conference on Diseases in Nature Communicable to man. Vancouver August 10-13.

Sifton E, Lombard D, Belanger, D. 2002. Healthy Ecosystems, Healthy People. United Nations International Children's Conference on the Environment. Victoria, Victoria, British Columbia. May 22-25.

Black WA, Patrick DM, Starr M, Fyfe M, Romney M, Stephen C, et al. 2002. A unique outbreak on Vancouver Island, Canada due to *Cryptococcus neoformans var. gatti* - a "new" pathogen. *Instituto Nacional de Enfermedades Respiratorias. Mazatlan*. April 2-5.

Budget 2002-2003			
	Income	Expense	Balance
Salaries and benefits	275,000	200,000	75,000
Administrative costs	9,000	6,000	3,000
Travel	6,000	4,000	2,000
Supplies and Equipment	3,000	3,000	0
Total	293,000	213,000	80,000

Overview of the CCH

The CCH began in 1996 as an affiliation of interested investigators at the medical school at UBC, the Western College of Veterinary Medicine and Vancouver Aquarium. Since then, new instructional members have joined us including the Ontario veterinary College and Malaspina University-College.

The CCH became an independent non-profit organization five years ago. The Centre provides its clientele with objective advice and solutions to problems they are dealing with. The CCH does not take advocacy positions.

The CCH is here to help people solve health problems. We view health as a product of our interactions of the organisms with the world around them. Our efforts are divided into several themes: risk assessment, public health, fish and wildlife health, education, policy evaluation and research planning.

The CCH has the reputation of being able to bridge several disciplines affecting environmental and organism health. University affiliations in medical and veterinary colleges as well as in biology departments provides us with a broad view and understanding of how the determinants of health interact and affect well-being.

The CCH employs a small core at the hub of a network of like-minded investigators. We strive to bring in others to

collaborate on our projects whenever possible. Government scientists and managers, university faculty, sub-contractors and students all participate in CCH activities. Our work is funded through competitive grants and research contracts. Our major source of funds are federal and provincial government agencies .

The CCH acts somewhat like a private academic unit. Involving students in our work is very important. There are few opportunities for students to gain experience in a working multidisciplinary health group. We are pleased to provide that opportunity.

The CCH is located in Nanaimo, British Columbia. However, we work on projects across Canada and internationally.

