# Scientists' Declaration to Protect Intact, Old-Growth Rainforests of Clayoquot Sound in British Columbia

As scientists, we urge the British Columbia government to recognize the global significance of its intact coastal rainforests by protecting them from logging and development, particularly the intact valleys of the Clayoquot Sound UNESCO Biosphere Reserve<sup>1</sup>. Clayoquot Sound is recognized as a biosphere reserve because it is one of the few remaining intact temperate rainforests in the world.

Temperate rainforests constitute only about 2.5 percent of the earth's forests, and British Columbia's coastal forests are a global resource representing over one-quarter of this total<sup>2</sup>. However, productive rainforests have been reduced by more than one-half throughout British Columbia and up to three-quarters on Vancouver Island<sup>3</sup>. Thus, protection of remaining intact rainforests is of vital conservation importance.

New information shows that British Columbia's Great Bear, Haida Gwaii, and Clayoquot Sound rainforests may play an important role in helping to stabilize the global climate, as these forests store an estimated 1.8 billion tonnes of carbon, the equivalent of nearly 100 times the province's official annual greenhouse gas emissions<sup>4</sup>. When rainforests are cut down, up to 40 percent of their stored carbon is released as a global warming pollutant<sup>5</sup>.

Clayoquot Sound's temperate rainforests remain highly vulnerable to continued development. With the exception of the valleys within Strathcona Park, Clayoquot Sound's parks, as well as the watershed reserves created in 2006, are likely too small and fragmented to maintain viable populations of rainforest species. The watershed reserves are also open to some forms of development.

Therefore, given the global importance of the region and the imminent threats posed to intact rainforests, we the undersigned urge First Nations, provincial and federal decision-makers, logging companies, and other stakeholders to cease logging in all remaining intact valleys of Clayoquot Sound. We propose that these areas receive full recognition and protection as core conservation areas of the biosphere reserve to preserve the integrity of its ecosystems<sup>6</sup>.

<sup>&</sup>lt;sup>1</sup> The current declaration builds on the 2005 "Scientists' Declaration to Protect the Ancient Rainforest of Clayoquot Sound, British Columbia," signed by 14 highly recognized scientists.

<sup>&</sup>lt;sup>2</sup> DellaSala, D. A. 2011 (ed.). Temperate and boreal rainforests of the world: ecology and conservation. Island Press, Washington, D.C.

<sup>&</sup>lt;sup>3</sup> Figures provided by Sierra Club BC.

Carbon storage estimates were extrapolated from State of British Columbia's Coastal Rainforest, Sierra Club BC 2009 (<a href="https://www.sierraclub.bc.ca/campaign-spotlights/coastal-rainforest-at-risk">www.sierraclub.bc.ca/campaign-spotlights/coastal-rainforest-at-risk</a>), converted to CO<sub>2</sub>-equivalents, and then compared to official annual greenhouse gas emissions in BC (<a href="https://www.env.gov.bc.ca/cas/mitigation/ghg">www.env.gov.bc.ca/cas/mitigation/ghg</a> inventory/index.html).

<sup>&</sup>lt;sup>5</sup> Harmon, M. E., S. L. Garman, and W. K. Ferrell. 1996. Modeling Historical Patterns of Tree Utilization in the Pacific Northwest: Carbon Sequestration Implications. Ecological Applications 6:641–652.

<sup>&</sup>lt;sup>6</sup> A protected area under Category 1 of The World Conservation Union (IUCN) World Commission on Protected Areas would not infringe upon the rights of indigenous peoples to extract resources for traditional, subsistence and ecologically sensitive development purposes, such as non-timber forest products, eco-tourism, and other sustainable activities.

# Signed:

Affiliations listed for identification purposes only. Signatures collected by Dominick DellaSala, Chief Scientist and President of Geos Institute, with assistance from Friends of Clayoquot Sound. 133 signatories as of November 1, 2011.

#### Aneil Agrawal, Ph.D.

Associate Professor, Ecology & Evol. Biology University of Toronto Toronto, ON

## Cecile Albert, Ph.D.

Marie Curie Postdoctoral Fellow, Biology McGill University Montreal, QC

#### Robert L. Allen, M.Sc.

Professor of Biology Santa Ana College Santa Ana, CA

#### John M. Anderies, Ph.D.

School of Human Evolution and Change Tempe, AZ

#### Robert Anthony, Ph.D.

Professor of Wildlife Ecology Oregon State University Corvallis, OR

#### Richard G. Baker, Ph.D.

Professor Emeritus of Geoscience University of Iowa Atalissa, IA

## Bruce G. Baldwin, Ph.D.

W. L. Jepson Professor and Curator University of California, Berkeley Berkeley, CA

## Jesse R. Barber, Ph.D.

Assistant Professor of Biology Boise State University Boise, ID

#### Linda Sue Barnes, Ph.D.

Professor Emerita Methodist University Fayetteville, NC

#### Steven R. Beissinger, Ph.D.

Leopold Chair in Wildlife Biology University of California, Berkeley Berkeley, CA

#### Harvey Blankespoor, Ph.D.

Professor Emeritus of Biology Hope College and Univ. of Michigan Holland, MI

# Bazartseren Boldgiv, Ph.D.

Professor of Ecology Philadelphia, PA

## Richard Bradley, Ph.D.

Associate Professor, EEO Biology The Ohio State University Marion, OH

## Solange Brault, Ph.D.

Associate Professor of Biology Univ. of Massachusetts, Boston Boston, MA

#### Peter F. Brussard, Ph.D.

Professor Emeritus of Biology University of Nevada, Reno Reno, NV

#### John Cairns, Jr., Ph.D.

University Distinguished Professor Blacksburg, VA

## Jocelyn Campbell, Ph.D.

University of British Columbia Vancouver. BC

## **Charles S. Churcher**

Professor Emeritus of Zoology University of Toronto Toronto, ON

## Darwyn Coxson, Ph.D.

Ecosystem Science and Management University of Northern BC Prince George, BC

#### Frank Lance Craighead, Ph.D.

Executive Director Craighead Env. Research Institute Bozeman, MT

# William G. R. Crampton, Ph.D.

Assistant Professor of Biology University of Central Florida Orlando, FL

## Michael A. Cunningham, Ph.D.

Associate Professor of EEO Biology The Ohio State University Lima, OH

#### Chris T. Darimont, Ph.D.

University of California, Santa Cruz Santa Cruz, CA

## Jim Darling, Ph.D.

Wildlife Biologist Pacific Wildlife Foundation Vancouver, BC

## Luise K. Davis, Ph.D.

Certified Wetlands Scientist (retired) Pittsburgh, PA

## Paul K. Dayton, Ph.D.

Professor of Marine Ecology Scripps Institution of Oceanography La Jolla, CA

#### Dominick A. DellaSala, Ph.D.

Chief Scientist and President Geos Institute Ashland, OR

#### David F. DeSante, Ph.D.

The Institute for Bird Populations Point Reyes Station, CA

## Robert DeWreede, Ph.D.

Professor Emeritus of Botany University of British Columbia Vancouver, BC

#### Chris Feldman, Ph.D.

Research Professor of Biology University of Nevada, Reno Reno, NV

#### Rebe Feraldi, M.Sc.

Environmental Scientist University of California, Santa Barbara Santa Barbara, CA

## Thomas L. Fleischner, Ph.D.

Professor of Environmental Studies Prescott College Prescott, AZ

## Bristol Foster, Ph.D.

Ecologist (retired)
Saltspring Island, BC

# Alejandro Frid, Ph.D.

Vancouver Aquarium Marine Sc. Ctr. Vancouver, BC

## Jed Fuhrman, Ph.D.

McCulloch Crosby Chair of Marine Biology University of Southern California Los Angeles, CA

#### Stephen W. Fuller, Ph.D.

Professor of Biological Sciences University of Mary Washington Fredericksburg, VA

#### Bob Gillespie, Ph.D.

Professor, Ag. & Natural Resource Systems Wenatchee Valley College Wenatchee, WA

#### Sean Graham, Ph.D.

Associate Professor University of British Columbia Vancouver, BC

## Steven Green, Ph.D.

Professor of Biology University of Miami Coral Gables, FL

## Vincent P. Gutschick, Ph.D.

Director
Global Change Consulting Consortium
Las Cruces, NM

# John E. Hall, Ph.D.

Professor Emeritus of Microbiology West Virginia University Morgantown, WV

## Healy Hamilton, Ph.D.

California Academy of Sciences San Francisco, CA

## Morgan Hocking, Ph.D.

NSERC Postdoctoral Fellow, Biological Sciences Simon Fraser University Burnaby, BC

## Karen Holl, Ph.D.

Professor of Environmental Studies University of California, Santa Cruz Santa Cruz, CA

## Malcolm L. Hunter, Jr., Ph.D.

Libra Professor of Conservation Biology University of Maine Milford, ME

## David W. Inouye, Ph.D.

Professor of Biology University of Maryland College Park, MD

## Charles H. Janson, Ph.D.

Associate Dean of Biology University of Montana Missoula, MT

#### David M. Jarzen, Ph.D.

Senior Research Scientist Florida Museum of Natural History Gainesville, FL

#### Alan Journet, Ph.D.

Geos Institute Ashland, OR

#### James R. Karr, Ph.D.

**Professor Emeritus** 

University of Washington, Seattle Seattle, WA

# Sterling C. Keeley, Ph.D.

Professor of Botany University of Hawaii Honolulu, HI

#### Jamie B. Kirkpatrick, Ph.D.

Prof. of Geography and Env. Studies University of Tasmania Hobart, Tasmania, AUSTRALIA

## Marni Koopman, Ph.D.

Climate Change Scientist Geos Institute Ashland, OR

## Pavel Kratina, Ph.D.

Zoology Department University of British Columbia Vancouver, BC

#### Pavel Krestov, Ph.D.

Inst. of Biology and Soil Science Vladivostok, RUSSIA

## Martin Krkosek, Ph.D.

Lecturer, Zoology Department University of Otago, Dunedin, NEW ZEALAND

## Scott Lefler, Ph.D.

Biochemistry Lecturer Arizona State University Tempe, AZ

#### Jason A. Lillegraven, Ph.D.

Professor Emeritus University of Wyoming Laramie, WY

## Harvey B. Lillywhite, Ph.D.

Professor of Biology University of Florida Gainesville, FL

#### Zoe Lindo, Ph.D.

Assistant Professor of Biology University of Western Ontario London, ON

## Frank Logiudice, M.Sc.

Undergraduate Biology Program Coord. University of Central Florida Orlando, FL

#### Travis Marsico, Ph.D.

Assistant Professor of Botany Arkansas State University Jonesboro, AR

#### Tara Martin, Ph.D.

Research Scientist University of British Columbia Vancouver, BC

#### Ashley McCrea Strub, Ph.D.

University of British Columbia Vancouver, BC

# Wayne McCrory, R.P.Bio.

McCrory Wildlife Services New Denver, BC

## Gary K. Meffe, Ph.D.

Consulting Editor, Conservation Biology University of Florida Gainesville, FL

#### Brian T. Miller, Ph.D.

Professor of Biology Middle Tennessee State University Murfreesboro, TN

## Faisal Moola, Ph.D.

Adjunct Professor of Forestry University of Toronto Toronto, ON

## Rob Mrowka, M.Sc.

Ecologist

Center for Biological Diversity North Las Vegas, NV

#### Chris Myers, Ph.D.

Professor of Zoology Miami University Oxford, OH

## Barry R. Noon, Ph.D.

Professor of Ecology Colorado State University Fort Collins, CO

#### Reed Noss, Ph.D.

Professor of Conservation Biology University of Central Florida Orlando, FL

#### Dennis Odion, Ph.D.

Southern Oregon University Ashland, OR

## Gordon Orians, Ph.D

Professor Emeritus of Biology University of Washington Seattle, WA

## Craig Orr, Ph.D.

Executive Director Watershed Watch Salmon Society Coquitlam, BC

#### Sarah Otto, Ph.D.

Chair of Biodiversity Research Centre University of British Columbia Vancouver, BC

## Sergio Paone, Ph.D.

Chemistry Lab Coordinator / Instructor Brock University St. Catharines, ON

# Paul C. Paquet, Ph.D.

Assoc. Professor of Environmental Design University of Calgary Calgary, AB

#### Lee R. Parker, Ph.D.

Professor Emeritus California Polytechnic State University San Luis Obispo, CA

## Gustav Paulay, Ph.D.

Curator / Professor Florida Museum of Natural History Gainesville, FL

## Timothy A. Pearce, Ph.D.

Pittsburgh, PA

## Corey Peet, M.Sc.

Aquaculture Biologist David Suzuki Foundation Vancouver, BC

## David A. Perry, Ph.D

Professor Emeritus Oregon State University Selma, OR

#### Jana Petermann, Ph.D.

University of British Columbia Vancouver, BC

## Steven Phillips, Ph.D.

Research Scientist Florham Park, NJ

# Anna Pidgeon, Ph.D.

Assistant Professor University of Wisconsin, Madison Madison, WI

## Chris Pielou, Ph.D.

Killam Prof. of Math. Ecol. (retired) Dalhousie University Halifax, NS

#### Jim Pojar, Ph.D.

Forest Ecologist (retired) Smithers, BC

## Thomas Michael Power, Ph.D.

Professor Emeritus of Economics University of Montana Missoula, MT

## Stan Proboszcz, M.Sc.

Fisheries Biologist Watershed Watch Salmon Society Coquitlam, BC

#### Robert M. Pyle, Ph.D

Biologist and Founder Xerces Society Gray's River, WA

#### Bronwyn Rayfield, Ph.D.

NSERC Postdoctoral Fellow, Biology McGill University Montreal, QC

# William Rees, Ph.D.

Professor, School of Comm. & Reg. Planning University of British Columbia Vancouver, BC

# Richard Ring, Ph.D.

Professor Emeritus of Biology University of Victoria Victoria, BC

## Barbara A. Roy, Ph.D.

Professor of Biology University of Oregon Eugene, OR

## Nicanor Saliendra, Ph.D.

Forest Biometeorologist Univ. of Maryland, Baltimore County Baltimore, MD

#### Anne Salomon, Ph.D.

Hakai Prof., Coastal Marine Ecol. & Conserv. Simon Fraser University Burnaby, BC

#### Scott Samuels, Ph.D.

Professor of Biology University of Montana Missoula, MT

#### Akash Sastri, Ph.D.

Postdoctoral Fellow, Biological Sciences Université du Québec à Montréal Montréal, QC

#### Melissa Savage, Ph.D.

Professor Emerita of Geography University of California, Los Angeles Los Angeles, CA

# David Schindler, Ph.D.

Killam Professor of Ecology University of Alberta Edmonton, AB

## Fiona K. A. Schmiegelow, Ph.D.

Director, North. Conserv. Sc. Program University of Alberta Edmonton, AB

## John W. Schoen, Ph.D.

Senior Science Advisor Audubon Alaska Anchorage, AK

## Geoffrey G. E. Scudder, Ph.D.

Professor Emeritus of Zoology University of British Columbia Vancouver, BC

# Suzanne Simard, Ph.D.

Professor of Forest Ecology University of British Columbia Vancouver, BC

## Sandy Smith, Ph.D.

Dean and Professor of Forestry University of Toronto Toronto, ON

## Gigi Spates, M.Sc.

Ecologist and Env. Scientist (retired)
Quogue Wildlife Refuge
Southold, NY

## Wayne D. Spencer, Ph.D.

Senior Conservation Biologist Conservation Biology Institute San Diego, CA

## Mark Spoljaric, M.Sc.

Biologist Haida Fisheries Program Queen Charlotte, BC

## Diane Srivastava, Ph.D.

Associate Professor of Zoology University of British Columbia Vancouver, BC

## Alan Stemler, Ph.D.

Professor Emeritus University of California, Davis Davis, CA

# Glenn R. Stewart, Ph.D.

Prof. Emeritus of Zoology & Env. Science Cal. State Polytechnic Univ., Pomona Pomona, CA

#### Martin H. H. Stevens, Ph.D.

Professor of Botany Miami University Oxford, OH

#### Billie J. Swalla, Ph.D.

Professor of Biology University of Washington Seattle, WA

## Michael C. Swift, Ph.D.

Professor of Biology Olaf College Northfield, MN

## Robert Tafanelli, Ph.D

Fisheries Scientist (retired) New Mexico State University Las Cruces, NM

## Paul F. Torrence, Ph.D.

Prof. Emeritus of Chemistry & Biochemistry Northern Arizona University Flagstaff, AZ

## Vicki Tripoli, Ph.D.

Science Advisory Board Geos Institute Ashland, OR

# Anna L. Tyler, Ph.D.

Research Fellow Dartmouth Medical School Hanover, NH

## Mary Tyler, Ph.D.

Professor of Zoology University of Maine Old Town, ME

## Michael Van Clef, Ph.D.

President Ecological Solutions, LLC Great Meadows, NJ

## Amanda Vincent, Ph.D.

Director of Project Seahorse University of British Columbia Vancouver, BC

# Tim Vines, Ph.D.

Visiting Scholar, Botany Department University of British Columbia Vancouver, BC

#### David B. Wake, Ph.D.

Professor of Integrative Biology University of California, Berkeley Berkeley, CA

## Robert O. Wagner, Ph.D.

Senior Ecologist Quantitative Ecological Services, Inc. DeRidder, LA

## Gregory Walker, Ph.D.

Professor of Entomology University of California, Riverside Riverside, CA

## Donald M. Waller, Ph.D.

Professor of Botany University of Wisconsin Madison, WI

## Richard T. Ward, Ph.D.

Professor Emeritus of Botany Colorado State University Ft. Collins, CO

#### Gerald J. Wasserburg, Ph.D.

Prof. Emeritus of Geology & Geophysics California Institute of Technology Pasadena, CA

## Hartwell H. Welsh, Jr., Ph.D.

Research Wildlife Ecologist Redwood Science Laboratory Arcata, CA

## David F. Whitacre, Ph.D.

Biology Instructor Treasure Valley Math & Science Ctr. Boise, ID

# Neville Winchester, Ph.D.

Adjunct Assoc. Professor of Geography University of Victoria Victoria, BC

#### David Wilcove, Ph.D.

Professor of Ecology Princeton University Princeton, NJ