



THREE PILLARS FORM THE UNDERPINNINGS of Raincoast Conservation Foundation's mission: informed advocacy, scientific research, and environmental ethics.

Informed advocacy is the guiding principle of all Raincoast's conservation efforts; it's a distinctive approach that has earned us a unique niche in the environmental movement.

Our advocacy is informed by rigorous scientific research, and guided by the thoughtful consideration of environmental ethics. This allows us not only to broaden the collective knowledge of coastal ecology but also to deliver a strong conservation message.

By melding science *and* ethics into a more inclusive view of the natural world, we further our strategy for change; from the way wild salmon are managed to the way we treat our fellow nonhuman inhabitants, such as grizzly bears and wolves.

One example of how our thinking can influence change is Raincoast's broadening of the concept of *animal welfare*. We believe the philosophical boundaries that have traditionally defined animal welfare should be expanded to put the protection of *wild* species

and their habitat at the forefront.

In our view, securing the life requisites for marine and terrestrial wildlife is the quintessential application of animal welfare. This includes safeguarding carnivores from the trophy hunt, protecting species from the ravages of oil spills, advocating for adaptation strategies to assist fish and wildlife with climate change, and ensuring animals are not deprived of critical food sources such as spawning salmon.

We have featured our Salmon Carnivore project in this year's *Tracking Raincoast*, as it elegantly embodies our approach. Here, Raincoast scientists are addressing the question of how much salmon coastal carnivores really need. From this information emerges an informed basis for action.

In 2010 and beyond, Raincoast will continue to implement creative strategies and pursue innovative solutions to conservation problems. We will apply cutting edge science, pursue the acquisition of additional guide outfitting territories, and broadcast our message to millions through traditional and new media sources.

We invite you to join in our efforts on behalf of wild places and wild species throughout the BC coast.

Chris Genovali

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Executive Director, Raincoast Conservation Foundation



For the last 20 years, the grizzly bear hunt in British Columbia has been a source of noteworthy and unrelenting controversy. Both sides of the debate are stuck in a continual expert-driven argument in which each camp claims that science supports their respective positions. Given this stalemate, it is time that the debate over the grizzly hunt be conducted within the context of ethical considerations.

Grizzly bears, and other large carnivores such as wolves, black bears and cougars, are primarily shot and killed for gratuitous reasons; they are targeted by trophy hunters for sport and profit. Government authorities sanction this activity as a legitimate 'management tool.'

As Drs. Michael Nelson and Kelly Millenbah noted in their recent paper, *The Ethics of Hunting*, "to the degree the wildlife community begins to take philosophy and ethics more seriously, both as a realm of expertise that can be acquired and as a critical dimension of wildlife conservation, many elements of wildlife conservation and management would

look different."

Imagine a scenario in which wildlife managers, and the politicians to whom they answer, were required to incorporate ethical considerations into the decision making process for the grizzly, or any carnivore, hunt. No longer could they retreat behind arcane arguments that rely on population estimates, kill quotas, or worst of all, 'harvestable surpluses.'

The fact that people *can* hunt carnivores does not mean that they *ought* to hunt them. Further, while science provides information, it does not grant permission to behave unethically. In other words, the aforementioned management concepts that are ostensibly generated to inform, but in practice are used to justify the trophy hunting of large carnivores, do not provide intrinsic approval to do so.

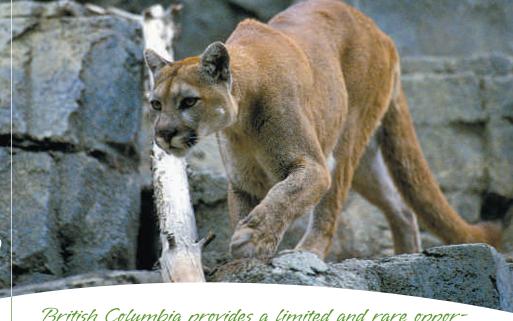
For over a decade, Raincoast has been at the forefront of efforts to stop the grizzly hunt. While we continue to press for an end to the hunt, we have also, literally, taken matters into our own hands. Not content to wait for government, Raincoast has adopted a pro-active, market-driven approach to address the commercial trophy hunting of grizzlies and other carnivores that we believe constitutes a 'win-win' solution.

In an unprecedented move, in 2005 Raincoast purchased a 24,000 square kilometre guide outfitting territory to end the commercial trophy hunting of grizzlies, black bears, wolves and other coastal carnivores. Since this acquisition, we have seen river valleys with previously depressed grizzly presence host growing numbers of boars, subadults and sows with cubs. The renewed presence of these bears in salmon rivers, where excessive hunting occurred for years, has also spurred commercial wildlife viewing and ecotourism opportunities.

The response to, and success of, this initiative has encouraged Raincoast to explore the purchase of additional coastal licenses. We are now in negotiations for a 3,500 square kilometre territory that encompasses the heart of spirit bear habitat. While hunting of the spirit bear is not permitted, the black bears that carry the recessive gene that generate white black bears, can be hunted. Once this territory is secure, we have our sights on larger tenures

further north!

Contact
Raincoast to
find out how you can
spend a week hunting
bears...with your
camera...aboard
Achiever.



British Columbia provides a limited and rare opportunity to do things right for cougars (aka mountain lions, pumas). Unbeknownst to many, our magnificent province harbours most of the remaining cougars in Canada. Unfortunately, BC's big cats are subjected to widespread and intense abuse from trophy hunting. Notably, however, only a small fraction of British Columbians hunt our province's cougars. We believe it is time to recognize that cougars have inherent worth that supersedes their value as trophies.

Over the last year, we launched BC's most comprehensive cougar conservation initiative ever undertaken by an NGO. Thousands of hours, hundreds of scientific articles, and dozens of interviews have gone into BC's first independent cougar conservation assessment report, which we will release this winter. As with all of our projects, our advocacy is grounded in science and informed by ethics.

The timing is fortuitous; the BC Ministry of Environment is drafting a long awaited cougar management plan. Raincoast will encourage managers and policymakers to adopt guidelines that safeguard and benefit cougars. Our recommendations are based in conservation science and animal welfare. Specifically, we will urge the province to protect the remaining high value habitat for cougars and their prey, eliminate trophy hunting, and replace lethal control with non-lethal strategies to reduce cougar-human conflict.

We believe our report and its recommendations will provide a strong foundation for success. Next, Raincoast will do what we do best – communicate through the media and in policy forums – with the goal of generating support to bolster our counsel. We will continue to be the voice for BC's 'neglected carnivore.'

It was another year at "full ahead" for marine operations and Achiever, our dedicated research vessel. Achiever left her winter moorage in Nanaimo in April and covered nearly 10,000 nautical miles before returning in October.

By providing time on *Achiever* at affordable rates, Raincoast has enabled an amazing variety of research programs. Collaborating with universities and other government organizations, this year's

studies included Stellar's sea lions, orcas, humpback whales, bears and wolves and, of course, their favorite food, salmon.

Achiever also collaborated on two film projects; one on humpback whales in Haida Gwaii and another on coastal wolves in the Great Bear Rainforest. These films will educate and inspire huge audiences in Japan as they tell of the beauty, complexity, and fragility of this

magnificent coast. Another highlight was donating a week to the Heiltsuk youth science camp at the Koeye River – a trip that inspired youth and crew alike.

Achiever is an invaluable part of fulfilling our responsibilities as owners of the huge guide outfitting territory we purchased in 2005. Our presence is a strong deterrent to illegal hunting of bears. Plus, our annual spring and fall trips (open to Raincoast supporters) fulfill our requirements to conduct commercial activities.

Achiever, and her crew of staff and volunteers have earned a reputation as a tough, capable platform with a work ethic unrivalled on the coast. We want to express our deep appreciation and thanks to her crew. True Raincoasters, they worked with dedication and humour through the long hard days and nights.



Special Feature

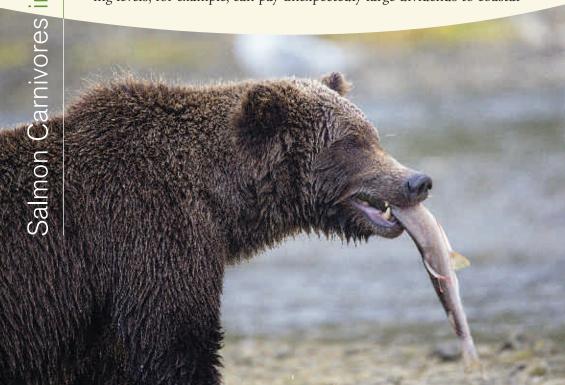
## What is the Salmon Carnivore Project?

Raincoast's newest flagship project integrates what we do best. Taking cues from Nature herself, we have interwoven salmon and carnivores and our expertise on both - into an integrative whole. Why? To find solutions to one of the most critical questions facing coastal BC today: how to share the wealth.

Sharing the wealth means allowing carnivores, such as wolves, grizzlies, and black bears enough salmon to ensure their survival. Why is this a challenge? Another predator - humans - usurp up to an astonishing 80% of the salmon destined for spawning gravels. Capturing salmon bound for creeks and the mouths of hungry carnivores, commercial and sport fisheries remove most of this seasonal bounty, year after year.

Against a backdrop of ever declining salmon numbers, not sharing this wealth of salmon has consequences, which we are rapidly assessing. Our team employs a suite of ecological sleuthing tools that would make CSI stars envious. DNA analyzed from non-invasively derived hair samples identifies the species, sex, and identification of each bear that visits our hair snagging stations (below). This allows us to track bear numbers over time and sound early warning bells if we detect declines. Isotope analyses on the same hairs estimate how much salmon each bear has consumed. This provides critical information that links food use to population health.

Well, how can humans share the wealth? Moderate reductions in fishing levels, for example, can pay unexpectedly large dividends to coastal



carnivores. Accordingly, we are pressuring Canada's Department of Fisheries and Oceans to implement fishing plans with lower harvest rates so that more salmon can return to rivers and awaiting carnivores. Plus, we are proposing that some salmon runs be managed solely for bears and wildlife. These would be runs spawning in parks and conservancies. After all, these parks were created to safeguard species such as grizzlies, black bears and wolves. But protected areas that host highly exploited salmon runs are not really protected if a primary nutrient and energy source is compromised.

## Animal welfare in the wild: salmon declines represent a food security issue for coastal carnivores

Suffering in all its forms represents an issue too often overlooked by scientists and environmentalists. At Raincoast, we take animal welfare seriously. And we take it – uniquely – into the wild. When salmon decline, it's not only the bear population that is impacted but also individual bears within the population. Malnourished females can lose their offspring. Larger males, in desperate attempts to fill their bellies, will brave visits to human sources of food, often with lethal consequences. These conceivable and observed consequences motivate us to learn more. But how can we possibly learn these intimate details about bears?

More CSI like tools. Our hormonal assays, also conducted on hair, give us insight into stress levels, reproductive activity, and starvation for a complete assessment of bear health in lean times of limited salmon.

Mindful that our research and advocacy must transcend ecological arguments alone, our team argues that salmon declines also represent a food security issue. It's quite simple; we ought to be concerned with the potential suffering of malnourished carnivores that have been deprived by humans of their sustenance. A low salmon year might mean financial or 'recreational' hardship for humans, but for those in the wild it could mean prolonged physical distress.

# Salmon carnivore research as a vehicle for outreach and change

We consider our science, and the solutions it discovers, only part of our contribution towards a brighter future for our beloved coastal carnivores. Experience has taught us that educational outreach leads to an informed and inspired public, who in turn demand change from their elected officials. Accordingly, we capitalize on opportunities our research provides us to solicit high profile media as well as pen our own opinions. But we go beyond this. Whether it's inspiring children in classrooms, several hundred people in an audience, or you to write a letter, Raincoast counts on others to help us in our pursuit of change.

## Salmon carnivore research on the ground

Non-invasively sampling hair from elusive carnivores is stinking hard work. We use a blend of fine aromas – mostly rotting fish essence – to attract bears to our barbed wire hair-snagging stations.

Lured by these pungent fragrances, bears' remarkable olfactory senses draw them from several kilometres away. Our strategically placed stations provide no lasting rewards; visiting bears often stay only a few seconds, but they leave behind a precious souvenir. In addition to hair samples, the passing of these evanescent creatures is recorded by our inconspicuous trail cameras.

During the 2009 pilot season, our field crew quickly became a well-oiled team. Working from dawn to dusk for six weeks, we monitored 92 snag stations across a remote 2,500 sq km study area. We set up and took down 2,300 metres of barbed wire fencing, pounded more than 600 fencing staples, poured 1,104 litres of smelly bait, and collected more

fencing staples, poured 1,104 litres of smelly bait, and collected more than 500 hair samples. In the coming months, we eagerly await results from lab analyses. Though glad for a winter break, we look forward to next year's field season when we will take on a larger study area and undoubtedly new challenges and adventures.

Below, right: Hidden cameras catch elusive predators that use the trails and bait stations.
Below, left: Project lead, Dr. Chris Darimont adds the 'stink source' that will lure bears to the hair snagging stations.

#### THE SALMON CARNIVORE TEAM



Doug Brown Jr. (4 years) Doug wears many (rain) hats: field biologist, bear guide, boat pilot extraordinaire, official Raincoast photographer, and field station manager. Literally and figuratively, Doug helps keep Raincoast and the Salmon Carnivore team afloat. His local eyes keep us safe, local knowledge ensures we are informed. and local sense of hospitality makes everyone feel welcome.



Heather Bryan
(4 years)
Our PhD student,
and mentor to all of
us in compassion
and generosity of
spirit, Heather's
passion is assessing carnivore health
(diseases and

hormones). Going beyond the science, she volunteers as a Lets Talk Science educator, dazzling children from Bella Bella to Saskatoon with fun facts about wolves, bears. and salmon of the Raincoast. Her adventurous research also qualifies her as an ambassador for Wings Worldquest, an organization that celebrates extraordinary women explorers and scientists as mentors for women worldwide.



Dr. Chris Darimont (10 years) Nurtured by Raincoast for a decade. Chris has transitioned from wide-eyed undergraduate volunteer to our dedicated Director of Science. Now a prominent scholar, his research appears in top journals that influence wildlife and fisheries policy in BC and beyond. But he values most the recognition he receives for actions many other scientists shun: grass-roots activism, outspokenness in the media, and compassion towards animals. For this, he has been honoured by the International Fund for Animal Welfare, Earth Day Canada, and the Animal Welfare Institute.



Misty MacDuffee (10 years) Misty puts the Salmon into Salmon Carnivore, As a biologist for over a decade, she digs salmon, and literally. Her work on Rivers Inlet salmon involved coring the lake bottom and looking for clues of past salmon abundance before the sockeye collapsed, and grizzly bears paid the price. She leverages this knowledge as a campaigner to reform salmon management. Misty represents the conservation sector at the Integrated Harvest

Management Committee where DFO makes decisions about fishing plans. Misty is affecting change from the inside, advancing a position on sharing the wealth of salmon.



Dr. Paul Paquet (12 years) As Raincoast's intellectual and philosophical mentor in science, ethics, and campaigning, we celebrate Paul as our honoured leader. His 30 year history of speaking out for his study animals has probably saved more carnivores from human harm than the efforts of any other person on the planet. And why did he choose to serve Raincoast? Because he admitted we reinspired him after some tough conservation losses he witnessed elsewhere. Emanating sincerity and positivity, he empowers our team to succeed.

More than one billion juvenile Pacific salmon migrate annually from rivers to sea along BC's coast, while myriad forms of marine life await their nutritional offerings. One organism that has become a major consumer of juvenile salmon is the sea louse: a native parasite now proliferating on salmon farms located along salmon migration routes.

In early 2009, Raincoast presented findings from two years of sea lice investigations on juvenile pink and chum salmon to the Pacific Salmon Forum (PSF), who in turn incorporated our results into their policy recommendations to government. Our research informed the PSF that salmon farms elevate lice levels on migrating wild juvenile salmon, and that infection levels rise in concert with the amount of salmon produced in a farm region. Our research paper, submitted to the Canadian Journal of Fisheries and Aquatic Sciences, is now in review.

2009 saw the lowest number of sockeye salmon return to the Fraser River, despite favourable ocean conditions for survival of the large numbers of young sockeye that went to sea in 2007. Fortunately, 2007 was also the year we began investigating whether juvenile sockeye were at risk to sea lice infection from commercial salmon farms. Our research shows that juvenile Fraser sockeye migrating past salmon farms in the Discovery Islands are more infected with lice than sockeye from the Skeena and Nass Rivers in the north. We will use our findings to show the ineffectiveness of the BC Sea Lice Action Plan to address threatened sockeye populations. Raincoast will be on the water again in 2010 with our research focusing on threats from fish farms to young Fraser sockeye.





The number of threats facing marine mammals on Canada's west coast continues to rise, and Raincoast continues to act as a voice for their protection. Toxic contamination, underwater noise, increasing ocean acidity, algal 'dead zones', and declining fish populations are issues that require focused attention. Of immediate concern is the plan by oil industry giant Enbridge Inc. to construct a twinned pipeline from the Alberta Tar Sands to Kitimat in BC. This would also mean supertankers in our inshore coastal waters. The project promises to bring jobs to northern communities hard hit by unemployment.

Raincoast works with other environmental groups to show that the long term environmental risks of this project far outweigh their short-term economic promises. This year, Raincoast helped bring Dr. Riki

Ott, an Alaskan 'fisherma'am' and toxicologist to speak in BC. She shocked and informed crowds by describing how the long-term economic and environmental effects of the Exxon Valdez oil spill devastated communities in ways that were never imagined. Also, Raincoast and other ENGOs spearheaded a lawsuit against the federal government for failing to adequately protect areas that have already been identified as critical habitat.

The route that the supertankers would take from Kitimat to overseas markets passes directly through important habitat for northern resident killer whales and sea otters. The tanker route would also travel directly through marine mammal hotspots that we identified in five years of systematic at sea surveys. We will highlight these ominous threats in our forthcoming 'What's at Stake' report.

The good news is that some species, such as humpback whales and sea otters, are showing signs of recovery in BC. Raincoast is striving to ensure this progress continues by conducting research and engaging in informed dialogue that encourages the conservation and welfare of marine mammals.



The highly productive waters of BC's coast support a tremendous diversity of marine birds. Nearly six million individuals from 15 or so seabird species breed here and millions more migrate along our coast, part of the Pacific Flyway, as they travel to and from breeding grounds in the north.

For four years, Raincoast undertook extensive marine bird surveys between Vancouver Island and Alaska and we've amassed an unparalleled amount of information about their at-sea distribution and density in these coastal waters. Raincoast has partnered with the University of Alaska Fairbanks to generate and test spatial models that predict where marine birds occur at certain times of the year and in what numbers. This information will be used to feed the debate over oil and energy development, as an alarming number of proposals are in the works for the BC coast.

Energy proposals such as oil and condensate pipelines to/from

Kitimat, tanker traffic through the Inside Passage and one of the world's largest wind farms in northern Hecate Strait, all threaten marine life. Raincoast will share our information and expertise to link looming threats from energy demands with the potential costs to marine birds and ecosystems. We will also be releasing a pilot study that explores the potential conflict between BC's marine birds and wind

energy, and offers strategic solutions for minimizing conflict.

Finally, we're thrilled to announce our newest project that focuses on Pacific herring and broader ecosystem linkages. As a cornerstone species and one of BC's most abundant fish, herring are of tremendous ecological importance. 2010 promises new insights into these fish and the marine and coastline ecosystems they influence.



The eggs of Pacific herring attached to kelp

It has been another busy year for the Raincoast Field Station. 2009 saw the beginning of new research projects, the continuation of projects from the previous years and coordination with other scientific organizations that share our goals to study and protect this area.

Situated on Denny Island, in a sheltered bay between the communities of Bella Bella and Shearwater on the BC central coast, the field station serves as a base of operations for our research crews and a safe

moorage for our boats. It is equipped with all the facilities needed for eight people to live comfortably after a long, often wet, day in the field. There is also office space with phone, internet and plenty of storage.

While secluded, the field station is still central enough to undertake outreach and education programs with the nearby communities,

and to the large number of travelers who pass through the area in the warmer months.

As such, it has become a destination stop, of sorts, for ecotour groups. Our field station coordinator updates guests aboard these trips about Raincoast projects, shares the findings from previous research and builds enthusiasm for efforts to protect BC's coastal ecosystems.

With humpback whales feeding near the dock, the occasional bear nibbling on our shoreline sedges, and migratory birds alighting on our doorstep, the significance of our conservation work multiplies with each wildlife sighting. We look forward to many years of supporting research and conservation efforts from this wondrous part of our world.



## Ways to get involved

# There are many ways to be involved in the important work of Raincoast.

Our Development Team is available to assist you give the Gift of your Choice.

- MONTHLY CONTRIBUTION (the Gift of Planning)
- GIFTS OF LIFE INSURANCE, RRSP'S OR RRIF'S (the Gift of Investing)
- REMEMBERING US IN YOUR WILL (the Gift of Legacy)
- HOST A THIRD PARTY EVENT (the Gift of Informing)
- CORPORATE & COMMUNITY GROUP DONATIONS (the Gift of Responsibility)
- PARTICIPATE IN AN EVENT (the Gift of Taking Part)

Raincoast Development Team donations@raincoast.org • 250.655.1229 ext 230





## Share our Vision

Investigate. Inform. Inspire.

Join the Conservation Circle with a gift of \$500 or more, either a one time or monthly donation.

Raincoast's Executive Director and Senior Research Team communicate directly with Conservation Circle members, reporting quarterly on current and immediate issues.

#### TRACKING RAINCOAST 2010 PHOTOGRAPHERS

DOUG BROWN, HEATHER BRYAN, CHRIS DARIMONT, BRIAN FALCONER, CAROLINE FOX TIM IRVIN, Raincoast Outfitters/top, this page ROBERTA OLENICK (neverspook.com) Ethics/top, Fraser River Sockeye, back cover GUILLAUME MAZILLE, Marine Mammals, Marine Birds/top; Field Station/top KLAUS POMMERENKE (bears-and-more.de) cover, Coastal Cougars LARRY TRAVIS (raincoastimages.org) inside cover, Salmon Carnivores



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A note to our US supporters: Please complete this form (cheques or money orders payable to Raincoast US) and send to: Raincoast US, PO Box 311, Orcas Island, WA 98280. For online donations, please visit www.raincoast.org/donate and select the *Network for Good* icon.

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## Friends of Raincoast

profiles individuals who deserve special recognition for their dedication and generosity in helping protect the lands, waters and wildlife of coastal British Columbia.

### SAVVY AND SANDY SANDERS



FOR THE PAST DECADE, Savvy and Sandy Sanders have been volunteering, directing, transporting and supporting the staff and structure at Raincoast. Savvy, a retired submarine captain from the US navy, was first exposed to Raincoast's unarmed armada in 2002, when he took the helm for an unforgettable transit trip of a research vessel between Victoria and Bella Bella. The bonds that are established over critical repairs on high seas linger long, and both Savvy and Sandy became founding directors of Raincoast's US board. Since then (and a fleet upgrade) they have been an integral part of the Raincoast family. We cannot thank Sandy and Savvy enough for their dedication, support and service to the organization; they truly embody the phrase 'Friends of Raincoast.'



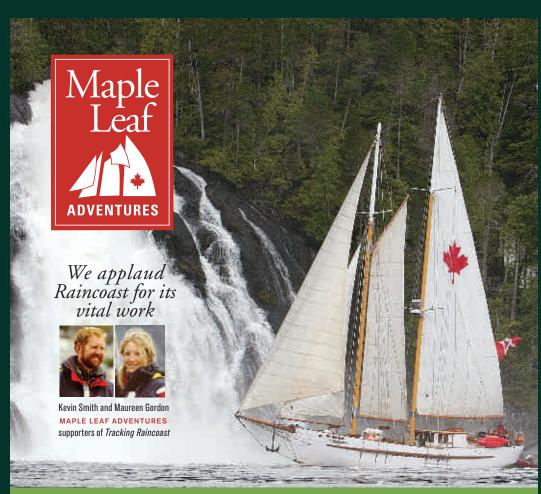


An official pledge charity of the Royal Victoria Marathon, Raincoast supporters run, walk, and volunteer to support Raincoast Kids and our Youth Outreach Programs. 100% of all money raised remains with Raincoast.

Make Your Next Challenge Count Join Raincoast in the 31st Annual Royal Victoria Marathon, October 10, 2010

Raincoast Team Coordinator Christine Hewitt marathon@raincoast.org

Maggy Wages, member of Raincoast's US board, raises money for Raincoast with each step and finishes the full marathon in 3:43:17.



#### EXCEPTIONAL ECOTOURISM EXPERIENCES DEPEND ON EXCEPTIONAL NATURE

Each year since 1991, the *Maple Leaf* has introduced guests from across North America to the awe of the Great Bear Rainforest. We share a passion with Raincoast for exploring and protecting it.

We also bring our guests to meet Raincoast scientists in the field.

The need to protect this place doesn't slow with the economy. We believe it's more important now than ever to support Raincoast's work. We encourage and applaud your support of them, too.

In the same vein, please consider making your next holiday a vote for responsible tourism. Amazing vacations can benefit conservation. If you wish to travel in the Great Bear Rainforest, we invite you to consider a journey on BC's classic schooner, the *Maple Leaf*.



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