



# Cloud Ridge Naturalists

FIELD DISCOVERY SEMINARS

2016

## A WORD ABOUT US

Cloud Ridge Naturalists is one of the oldest and most respected nonprofit environmental education programs in North America. Over the past 35 years, several thousand people have experienced the special blend of natural history education and exploration that Cloud Ridge offers. We are proud to provide learning opportunities that inspire and enable our participants to become better-informed stewards—not just “snapshot” sojourners of the natural world. Moving beyond the “last great place” model that drives traditional ecotourism remains a key component of our mission. Our educational vision embraces a multi-disciplinary perspective well grounded in state-of-the-art science. Just a glance through the biographies of our leaders and guest lecturers should convey the excellence and dedication they bring to everything we do—their expertise and passion for teaching is unsurpassed!

Our voyages take us to some of the world’s most beautiful wilderness areas—enjoying the wonder but always acknowledging the environmental challenges that transcend international and ecological boundaries. We minimize our travel footprint wherever we go—by small ship, boat, raft, sea kayak, or on foot—and work only with outfitters and guides whose operating principles and environmental ethics parallel our own. We select classic lodging, vintage boats, and expedition-style ships that have a strong sense of place and purpose. Your safety, comfort, and enjoyment are of upmost importance to us—even in the remotest of settings. Our groups are kept small and congenial, creating the best possible atmosphere for learning and discussion. More than 80% of our participants each year have traveled with us before. That matters to us. We look forward to welcoming new friends and old!

## A SEA CHANGE ...

Shifting Cloud Ridge’s focus to the global ocean realm is a *sea change* that embraces the extraordinary role that oceans play in our lives. What does the term “global ocean” mean—and why should we care? The world’s five ocean basins are interconnected by major surface and deep-water currents in a circulation system that creates a global ocean covering more than 70% of the earth’s surface. The global ocean is the world’s largest wilderness, with a lineage of life at least 3 billion years older than anything above sea level. Marine scientists estimate that 90% of the world’s biodiversity once resided in the global ocean—and that human actions have degraded ocean ecosystems more in the past 50 years than in all of human history. Cloud Ridge participants have witnessed dramatic examples of these changes during our Arctic and Antarctic voyages.

Thread by thread, the woven interconnections that exist between global climate, the oceans, and all terrestrial ecosystems are being revealed. The consequences of ignoring the environmental challenges facing the global ocean are truly profound. Conserving life in the sea and on land requires that we view the world through a vastly different lens—and that we inspire the next generation of ocean stewards to do the same. We must work to stem the tide ...



Common raven (MH)

## CONSERVATION IN FOCUS

Our **Conservation in Focus** voyages—Cloud Ridge’s “classroom afloat”—embody the true spirit of expeditionary discovery. Wherever we travel, we explore the extraordinary beauty and complexity of the natural world, but also learn how global warming and other environmental challenges are impacting the places we care about. Whether you are interested in conservation issues close to home or in the most remote corners of our changing world, making a difference requires a knowledge of natural history and an understanding of what is at risk. Our staff naturalists have dedicated their careers to portraying the inherent beauty of the natural world as well as the environmental dramas that threaten the fragile fabric of life. If you wish to share your trip experiences with images, our leaders can help you master or refine those skills. After each of our trips we’ll create a book—a visual memoir that weaves together the group’s best images of our shared explorations.

### INTRODUCING THE *M/V WESTWARD*

Pacific Catalyst’s *M/V Westward* is a Ted Geary-designed motor yacht—a wooden work of art with a history to match! This classic 86-foot cruising yacht was launched in 1924 as the flagship for the Alaska Coast Hunting and Cruising Co. For 20 years, she pioneered Alaska adventure travel and is listed on the US National Register of Historic Places for her maritime contributions. In *Westward*’s earliest years, she hosted a noteworthy clientele that included Walt Disney, George Eastman, E.F. Hutton and Marjorie Merriweather Post, Paul Mellon, and celebrities like Bing Crosby and John Wayne. She is also an accomplished world traveler, having logged a 47,000-mile circumnavigation of the globe in the 1970s and an equally impressive circumnavigation of the Pacific in 2007-2008. This elegant and supremely seaworthy vessel carries 12 passengers and a crew of 4. She is equipped with stabilizers for rough seas, a full complement of sea kayaks, a motorized skiff, and warm water snorkeling gear for explorations near and far.

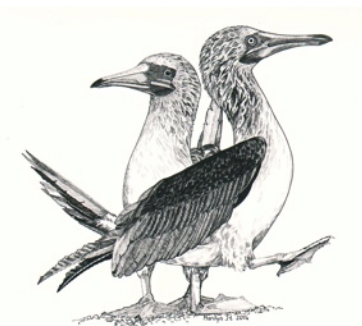
## CONSERVATION IN FOCUS (1) A VOYAGE TO BAJA CALIFORNIA AND THE SEA OF CORTEZ IN THE SPIRIT OF ED RICKETTS AND JOHN STEINBECK

**February 17-29, 2016    13 Days/12 Nights**

**Audrey Benedict, Dr. Geoff Hammerson,  
Wendy Shattil & Bob Rozinski, Carlos Gajon  
Bermúdez & the *M/V Westward*’s Crew**

Standing on the *Westward*’s foredeck, we see a cloudless arc of sky and a jagged spine of cactus-clad mountains towering above turquoise-hued water. Rising mirage-like out of the Pacific Ocean, Mexico’s Baja California Peninsula stretches south as a slender 800-mile-long cul-de-sac of the Sonoran Desert. Along its austere eastern shoreline, the Sea of Cortez (Gulf of California) separates the Baja peninsula from the rest of mainland Mexico. From Baja’s western coast, the Pacific Ocean stretches across one-third of the globe’s circumference before reaching the shores of another continent.

The sense that Baja California seems a world apart reflects its remarkable plate tectonic history and its biological setting. Baja California sits atop the oceanic Pacific Plate while mainland Mexico is situated on the continental North American Plate. Deep-seated plate movements along the southern trajectory of the great San Andreas Fault caused the peninsula to begin rifting northwest in relation to mainland Mexico about 25 million years ago. By 5 million years ago, the Pacific Ocean had flowed into the gulf-like breach between the plates, ultimately creating the Sea of Cortez. Episodes of intense volcanism along the peninsula’s mountainous spine and the resulting uplift of its eastern flanks produced the spectacular scenery we see today and triggered the region’s climatic transformation.



Blue-footed boobies (MH)

Tethered to the North American mainland by a narrow land bridge and surrounded by Pacific waters on three sides, Baja California is a treasure trove of biodiversity. With the evolutionary stage set by a million years of virtual isolation, the Sea of Cortez's 44 major islands and 900 smaller islands host the largest number of endemic plant and animal species in North America. Of the 695 species of island-dwelling vascular plants, 20 genera are endemic. These islands are also among the world's richest in terms of reptile diversity, with at least 50 endemic species.

The late Jacques Cousteau, ocean explorer and renowned conservationist, described the Sea of Cortez as "the aquarium of the world." Of the 891 species of fish that occur in these waters, 90 are endemics. The region also contains 39% of the world's total number of marine mammal species and one-third of the world's cetacean species. In fact, many biologists refer to the Sea of Cortez and its islands as the "Mexican Galapagos." In 2005, with tourism pressures, overfishing, and other environmental threats taking a drastic toll, UNESCO and the Mexican government designated much of the Sea of Cortez and nearly 50% of Baja California Sur as a World Heritage Site.



Gray whale (MH)

Legendary marine biologist Ed Ricketts is known for his pioneering studies of marine ecology along the Pacific coastline of North America. His book *Between Pacific Tides*, first published in 1939 and now in its fifth edition, remains the classic reference for the Pacific intertidal zone for students and scientists alike. In the spring of 1940, Ed Ricketts and his ocean-loving friend, novelist John Steinbeck, embarked on a 4,000-mile expedition aboard the *Western Flyer*, a sturdy 76-foot purse seiner. The voyage would take them from California's Monterey Bay south around Baja California to the Sea of Cortez. Both men shared a profound curiosity and passion

for understanding the marine world. They also believed that their 6-week collecting trip in the Sea of Cortez would open a window as wide and horizonless as Charles Darwin's had aboard the *Beagle*. Their expedition resulted in two books—*Sea of Cortez: A Leisurely Journal of Travel and Research* (1941), which included Ricketts' collection catalog, and *The Log from the Sea of Cortez* (1951), the shorter version Steinbeck published following Ricketts' tragic death in 1948. Steinbeck often described their expedition as "bright with sun and wet with sea water." We follow in their wake ...

Our expedition to Baja California begins in Loreto, a picturesque town located on Baja's eastern shore. We'll travel by van along this beautiful coastline and then across the peninsula's jagged spine to Laguna San Ignacio, one of the three lagoons on Baja's west coast where gray whales gather in large numbers to give birth and breed. From our safari-style tented camp, our guides will take us in small open pangas to spend an unforgettable morning and afternoon drifting quietly in the lagoon in the midst of gray whale mothers and their calves. The experience is truly magical because the whales seem to be as curious about us as we are of them and may bring their calves right up to the boats. Imagine what it will be like to fall asleep listening to the breath sounds of hundreds of sleeping whales echoing across the star-lit water.

With memories of gray whales tucked away in our hearts and minds, we return to Loreto and begin our voyage in the Sea of Cortez. *Westward's* naturalist, kayak and snorkeling guide is Carlos Gajon, a La Paz native, whose knowledge of the region's human history and its remarkable ecosystems is legendary! He joins our naturalist team at the helm for this spectacular adventure. After being welcomed aboard by Capt. Bill Bailey and the *Westward's* crew we'll get underway for Isla Danzante. From the bow, we'll watch for red-billed tropicbirds and elegant terns swooping over the water and brown pelicans fishing the shallows. Traveling south, with *The Log from the Sea of Cortez* in hand, we'll visit several of the island and peninsula collection sites made famous by the pioneering Ricketts-Steinbeck expedition 75 years ago. On trips ashore, we'll explore the Sonoran desert world and search for some of the endemic plant and animal species that inhabit these islands. On some

islands, giant cardón cacti tower over a prickly understory of shrubs, providing welcome shade for a giant chuckwalla or a delicate gecko. Desert birding should treat us to good looks at pyrrhuloxia, white-winged doves, Gila woodpeckers, or the endemic Xantu's hummingbird.

Back aboard, drifting quietly through the nutrient-rich waters of the blue triangle, we'll hope to spot blue and sperm whales as they congregate to feed on the bounty of plankton and squid. We'll learn how El Niño and La Niña cycles in the Pacific influence the abundance of marine life and drive the storm systems that deliver nurturing moisture to the Baja peninsula and to the islands. Continuing south toward Isla San Jose, we'll have all eyes watching for black and least storm petrels skimming over the waves, foraging pairs of Craveri's murrelet, the tiniest of all murrelets, both blue-footed and brown boobies, Heermann's gulls, and magnificent frigatebirds. It is not uncommon to be treated to the aerial displays of mobula rays or, if we are lucky, the arrival of hundreds of long-beaked common dolphins riding our bow. We'll use sea kayaks to explore the labyrinth of mangroves in San Jose's expansive lagoon, ever-watchful for yellow-crowned night herons, white ibis, and mangrove warblers.

From our anchorage offshore Isla San Francisco, we'll get an early start and cruise past the California sea lion haulout at Los Islotes and then head to Isla Partida and Caleta Cardonal. We'll wander the island's mangrove-fringed shore and then hike to its beautiful desert heart. Our voyage's final anchorage will be at Bahia San Gabriel, along Isla Espiritu Santo's west side, where a spectacular colony of frigatebirds awaits us. The crystalline waters of our final night's anchorage may invite a sea kayak trip, a snorkel, or a sunset beach walk. Back aboard the *Westward*, we'll celebrate and savor the highlights of our trip over a fabulous dinner, raising our glasses to a final Baja sunset and the gift of our friends and crew.



Humpback whale fluke (MH)

**Price: \$6,950 (includes a \$1,000 deposit)**

**Group Size: 12 Trip Rating: 2-3**

**Price includes:** 3 nights' hotel accommodations (including 2/17 at a hotel near the LA airport and 2/18 & 2/20 in Loreto), 1 night (2/19) in the safari-style tented camp at San Ignacio Lagoon, all van transportation ashore, all meals ashore, 8 nights aboard *Westward*, 5 naturalist leaders, *Westward*'s 4-person crew, sea kayak outfitting and instruction, gratuities throughout, and a copy of the photo book of our voyage. The price quoted is **per person** based on double occupancy. Single accommodations are unavailable for this trip. **Does not** include roundtrip airfare from your departure point to Loreto or your return home from Los Cabos.

### **CONSERVATION IN FOCUS (2) A NATURALIST'S VOYAGE TO SOUTHEAST ALASKA'S WILD COAST**

**June 14-23, 2016 10 Days/9 Nights**

**Dr. Geoff Hammerson, Audrey Benedict,  
Bob Rozinski & Wendy Shattil, Sarah  
Drummond, and the *M/V Westward*'s Crew**

Few places in North America rival the scenic beauty and wildlife diversity of Southeast Alaska. Join us for an all-new voyage aboard our "classroom afloat"—the *M/V Westward*—as we explore the remote islands, spectacular fjords, old-growth forests, whale-rich waters, seabird colonies, sea lion haulouts, and tidepools of the outer coastal wilderness. The *M/V Westward* provides the perfect setting for our **Conservation in Focus** voyages. The use of sea kayaks allows us a special seal's-eye view of the marine world. Beginning sea kayakers will find this an ideal setting in which to learn. Unlike big cruise ships, *Westward* is trim enough to explore the narrowest of fjords and to wander among remote rocky islands. Each evening, as you enjoy another superb dinner and share the day's discoveries, we know you'll agree that there is no finer way to experience the wonders of Southeast Alaska.

We begin our adventure in Sitka, the political and cultural hub of Russian adventurism in Alaska and the North Pacific during the 19th century. This city offers a unique window into Tlingit history and a native people's struggle to preserve cultural identity in the face of a burgeoning European and American presence. Visits to the Totem Trail



National Historical Park and the Sheldon Jackson Museum reveal a powerful cultural and artistic tapestry that interweaves the natural world with a human lifeway that respects both. The siren call of the wild outer edge beckons and we board *Westward*, casting off for Krestof Sound. This will be the first of several anchorages in the midst of island archipelagos that beg our exploration. We'll island-hop our way from Klag Bay to White Sulphur Hot Springs, and then venture by kayak and skiff to the surf-lashed reefs and tidepools of the Porcupine Islands. Previous visits have been remarkable for their marine mammal and seabird diversity. Cruising north to Surge Bay, we'll have yet another chance to experience the rich intertidal wilderness of the outer coast and to see petroglyphs left behind by ancient voyagers.

If sea conditions smile upon us—an important “if” because we need reasonable seas in both directions—we embark on a 64-mile open ocean run along the southern edge of the Gulf of Alaska to Lituya Bay. The only access to this legendary outlier of Glacier Bay National Park is by small boat or float plane. The bay itself is a spectacular whale-shaped fjord that lies within the snowy embrace of the Fairweather Range. The fjord is situated at the confluence of three glaciers—the Lituya, the Cascade, and the North Crillon—and centered along the famous epicenter of intense geologic activity known as the Fairweather Fault.

Archaeological evidence reveals that the ancestral Huna Tlingit lived in Lituya Bay for thousands of years prior to the arrival of Europeans. In fact, Tlingit villagers were at Lituya Bay and greeted the arrival of Lapérouse's ship in 1786. The Tlingit's rich oral tradition tells us that they experienced the devastating effects of multiple earthquakes associated with the fault. Since 1899, nine earthquakes have rumbled across the region, toppling mountains and flaying this ice-carved landscape to its bedrock roots. In 1958, a magnitude 8.3 earthquake centered on Cross Sound, 45-miles to the southeast, set the fjord into earth-wrenching motion and triggered a landslide and a 1,740-foot-tsunami-like wave. The opportunity to explore the extraordinary geology and human history of Lituya Bay is a rare gift.

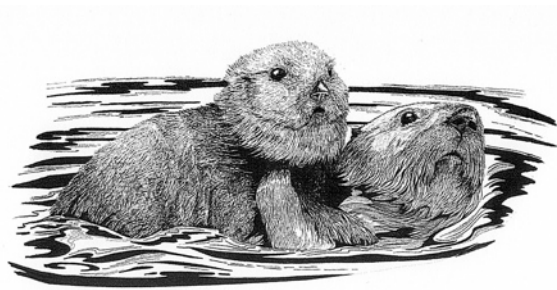


Brown bear (MH)

If sea conditions force a change in course, we'll head into Icy Strait and continue on to Dundas Bay, another fabulous outlier of Glacier Bay National Park. We'll have myriad photographic and natural history opportunities as we navigate Icy Strait's prime humpback whale waters. If our timing is right, the roiling waters near the mouth of the strait provide whales, Steller sea lions, harbor seals, and seabirds with a spectacular “fish buffet.” We'll be watching for humpback whales lunge-feeding and may even spot groups of humpbacks working cooperatively to entrap schools of small fish or krill through the creation of a “bubble net.” Continuing toward Dundas Bay we should see increasing numbers of sea otters and will be on the lookout for both brown and black bears working the intertidal areas.

In addition to exploring the natural history of Southeast Alaska, we'll discuss the impact that global warming is having on the region's glaciers and how changes in prevailing ocean currents may affect the populations of small fish that marine mammals and seabirds depend on for food. We'll also offer mini-workshops that help you hone your skills in portraying the world around you in a more compelling way—either through photography or sketching. We'll create a book based on our shared experiences and observations that truly captures the essence of Southeast Alaska and the wild outer coast.





Sea otters (MH)

**Price: \$6,550 (includes a \$1,000 deposit)**

**Group Size: 12 Trip Rating: 2-3**

**Price includes:** 1 night's lodging in Sitka (6/14) and 1 night's lodging in Juneau (6/22), 8 days/7 nights aboard the *M/V Westward*, all meals and beverages (wine/beer included) aboard and on-shore, the services of our 4 naturalist leaders, the *Westward*'s 4-person crew, full sea kayak outfitting and instruction, gratuities to the crew, boat/hotel transfers, and a copy of the trip's photo book. The price quoted is *per person* based on double occupancy; single accommodations are unavailable on this trip. **Does not include** round-trip airfare from your point of departure to Sitka on 6/14 or your return from Juneau on 6/23.



Marbled murrelets (MH)

## CONSERVATION IN FOCUS (3) THE SALISH SEA & SAN JUAN ISLANDS

**September 15-23, 2016 8 Days/7 Nights**

**Dr. Geoff Hammerson, Jenny Hahn, Audrey Benedict, Bob Rozinski & Wendy Shattil, and the *M/V Westward* Crew**

Thousands of years before the first Europeans arrived in the Pacific Northwest, the Coast Salish people flourished along the shores of one of the most biologically rich inland seas in the world—now known as the Salish Sea. Named in honor of those first inhabitants, the Salish Sea straddles the Canadian border and includes the marine

waters of Washington's Strait of Juan de Fuca, Puget Sound, the San Juan Islands, and British Columbia's Gulf Islands and the Strait of Georgia. Connected to the Pacific Ocean primarily via the Strait of Juan de Fuca, the Salish Sea receives an almost constant influx of nutrient-rich freshwater from British Columbia's Fraser River, the Skagit, and the many smaller rivers of Washington's mainland—all of which provide essential building blocks for the region's extraordinary biodiversity. The strong currents and extreme tidal exchanges in the Salish Sea create optimal conditions for nutrient upwelling and for the proliferation of the photosynthetic plankton that forms the basis of the marine food chain.

Life in the San Juan Archipelago is governed by the sea's rhythms—its extraordinary biological richness attributed to the rain shadow cast by the Olympic Mountains and the greater diversity of habitats available to plants and animals in these islands than occurs along the wetter mainland coast. Not surprisingly, the marine waters surrounding the San Juan Islands provide critical habitat for marine mammals such as migrating gray whales, both resident and "transient" populations of killer whales, harbor seals, Steller and California sea lions, and river otters. More than 165 species of birds depend on the Salish Sea and adjacent terrestrial habitats for their survival. The overwintering seabirds and ducks will just have begun arriving—the murrelets, guillemots, murres, rhinoceros auklets, scoters, and harlequin ducks. All seven species of Pacific salmon, including rainbow/steelhead and coastal cutthroat, occur in the Salish Sea. Both near-shore and deep-water habitats are also home to several "giants" of the marine world, including the Pacific giant octopus, plumose anemone, giant red sea urchin, and the geoduck, largest of the burrowing clams.

Today, nearly 8 million people live on the islands and in the mainland watersheds that nourish the Salish Sea on both sides of the international border. The impacts of global warming, ocean acidification, and pressures related to commercial fisheries, shellfish farming, and the looming threats of naval training activities and a major coal shipping port pose significant challenges. Scientists and citizen groups are working together to ensure that sea-based livelihoods are able to adapt with practices that promote sustainability.

Once again, our “classroom afloat” is the superbly comfortable *M/V Westward*. Jenny Hahn, one of the Northwest’s foremost naturalists and an award-winning author, joins our naturalist team for this voyage. She’ll share her knowledge of the Coast Salish and the edible delights to be found at the sea’s edge. Guest scientists for this voyage include Russel Barsh and Madrona Murphy, founders of Kwiáht, the Center for the Historical Ecology of the Salish Sea, and Dr. Joe Gaydos, the Chief Scientist for the Orcas Island-based SeaDoc Society’s marine research and conservation program. Moving beyond the familiar intertidal zone, Joe and his dive team conduct a “virtual dive” for us—transmitting live coverage of the deeper world to a big screen TV aboard *Westward* for us all to enjoy—no wet suit needed! We’ll create a photo book that truly captures the magical essence of the Salish Sea and all that we’ve seen and learned. Be inspired and learn how you can make a difference!

**Price: \$2,750 (includes a \$500 deposit)**

**Group Size: 12 Trip Rating: 2-3**

**Price includes:** 5 nights/6 days aboard the *Westward*, all meals and beverages, 2 nights’ lodging (9/15 and 9/22) in Friday Harbor on San Juan Island, 2 group dinners ashore, all instruction by our leaders and guest lecturers, sea kayak outfitting, the *Westward*’s 4-person crew, gratuities to the crew and honoraria to our guest lecturers, a copy of our group-produced photo book, and a copy of Audrey and Joe’s *The Salish Sea: Jewel of the Pacific Northwest* and Jenny’s *Pacific Feast*. The price quoted is per person based on double occupancy. Single accommodations are unavailable aboard *Westward*. A single supplement of \$350 is required for anyone preferring non-shared hotel accommodations. **Does not include** round-trip airfare or travel from your point of departure on 9/15 to Friday Harbor or your return on 9/23. This seminar begins with dinner and lodging in Friday Harbor on 9/15 and concludes with dinner and lodging in Friday Harbor on 9/23.



Pigeon guillemots (SD)



Magellanic penguins (MH)

### IN DARWIN’S FOOTSTEPS: PATAGONIA’S ATLANTIC COAST, LOS GLACIARES NATIONAL PARK, CAPE HORN & TIERRA DEL FUEGO

**November 5-23, 2016 →→ 18 Days/17 Nights**  
**Carol & Carlos Passera, Geoff Hammerson, Wendy Shattil & Bob Rozinski, Audrey Benedict and Guest Lecturers**

Permission to board! The year is 1831 and Captain Robert Fitzroy, commander of the HMS *Beagle*, is welcoming the newly appointed naturalist, 22-year-old Charles Darwin, to board her Majesty’s ship. Fitzroy’s instructions from the Admiralty are to continue the work begun on the *Beagle*’s first voyage and to survey the southern half of South America. Both men were inspired by naturalist Alexander von Humboldt’s epic travels in South America and are determined that their expedition exceed expectations. Darwin’s tasks as ship’s naturalist are to make detailed geological and biological observations and to collect specimens throughout the voyage. As the *Beagle* set sail for the Canary Islands and South America, neither man could have imagined that their five-year circumnavigation of the globe would become the most important scientific voyage of all time.

Charles Darwin combined unique abilities as a naturalist with an intuitive sense of geology—puzzle-solving skills that enabled him to become one of the world’s great scientists. After returning



to England, Darwin spent 20 years working through the *Beagle's* journals and his own notebooks, looking at specimens, conducting experiments, and corresponding with colleagues. Despite the fact that Darwin and Alfred Russel Wallace jointly presented their theory of natural selection to the Linnean Society in 1858, Darwin waited until 1869 to publish *On the Origin of Species*. His now-famous book set forth the framework for his theory of evolution—the multi-branched “tree of life”—and described the biological mechanisms responsible for the diversity of life on earth. This dazzling leap forward in science—the Darwinian Revolution—was also an unequivocal rebuttal of creationism. Darwin’s fossil evidence for pushing back earth’s antiquity shocked not only Europe’s most influential clerics but also many of the leading geologists of his day.

It has been 185 years since the HMS *Beagle* sailed from England’s shores to chart new waters in our understanding of biodiversity. In 2007, Cloud Ridge inaugurated the first of three groundbreaking voyages of discovery “In Darwin’s Footsteps.” This year’s land and sea-based journey traces Charles Darwin’s explorations along the remote Atlantic coastline of Patagonian Argentina and concludes in one the world’s most beautiful wilderness areas—Tierra del Fuego. Beginning in Buenos Aires, we tour the city that Darwin admired as much for its Spanish-Colonial architecture as for the exotic loveliness of its women. Flying to Comodoro Rivadavia, we head first to Bahia Bustamante and Malaspina Bay. From our beachfront cottages, we’ll explore this wild coastline, watching for southern right whales and killer whales, hiking through a petrified “forest” of 60-million-year-old trees, and photographing noisy colonies of South American sea lions, Magellanic penguins, kelp gulls, imperial cormorants, and royal terns.

Heading south to the remote coastal region of Puerto Deseado, we’ll watch for guanacos, rheas, and other wildlife. This starkly beautiful area offered Darwin a unique sampling of Patagonia’s biodiversity. At least 134 species of birds are recorded, including both Magellanic and rockhopper penguins, Darwin’s rheas, elegant crested tinamous, burrowing parrots, black-necked swans, and Andean condors. Of the 28 mammal species recorded, we should have good looks at sea lions, elephant seals, guanacos,

maras, hairy armadillos and perhaps catch a glimpse of a Patagonian skunk or a gray fox.

The remarkable estuary system here is home to a diversity of marine wildlife, including dolphins and noisy colonies of red-legged cormorants. Boating to Isla de los Pajaros, we’ll immerse ourselves in a colony of Magellanic penguins, snowy sheathbills, blackish oystercatchers, and giant petrels—a total sensory experience! If the seas permit, a landing at Isla Penguin gives us the chance to photograph both Magellanic and rock hopper penguins. We’ll also watch for the predatory skuas and petrels that opportunistically patrol these colonies. Gusty winds may give us the gift of black-browed albatrosses soaring over the waves. These seascapes and famous mariner’s landmarks like Cabo Blanco and Tower Rocks are featured in the paintings of Conrad Mertens, the *Beagle's* artist. No matter how remote these landscapes may seem to us, “nowhere is a place”—emboldened with the sea’s magic.



Red-legged Cormorants (MH)

Traveling inland across the vast Patagonian steppe, we visit Petrified Forest National Park, where Darwin found the fossilized remnants of a once-flourishing tropical forest. His journal devotes several pages to nearby San Julian and the Rio Santa Cruz valley, where he discovered a fossilized seashore extending more than 500 miles along the coast and inland to an elevation of 3,000 feet. Attempting to solve these and other geologic mysteries, Darwin proposed that the southern portion of South America must have been massively uplifted during “some epoch of



extreme violence!” It would take geologists another 100 years to realize that Darwin’s dynamic earth perspective—mountains rising, climates changing—paved the way for our modern understanding of the forces of plate tectonics, continental drift and mountain-building.



Guanaco and chulengo (MH)

Darwin marveled at the braided network of rivers the men encountered as they explored the arid steppe. Guessing that meltwater torrents from enormous glaciers in the high Andes must feed these rivers, Darwin and Fitzroy embarked on a 19-day small boat expedition up the Rio Santa Cruz. Having misjudged the distances and the supplies needed, the men were forced to turn back. In 1876, naturalist Perito Moreno would discover the Santa Cruz’s icy stronghold—today’s Los Glaciares National Park. This UNESCO World Heritage Site embraces a giant ice cap that sits astride the spectacular spine of the Andes and feeds 47 glaciers. As Darwin surmised, meltwater from 13 of these glaciers flows toward the Atlantic Ocean. Darwin will be with us in spirit as we explore the park and discuss the impacts of global warming on the world’s glaciers.

Flying to Ushuaia, the world’s southernmost city, we begin our land-based exploration of Tierra del Fuego with a visit to historic Estancia Harberton and its Akatashun Bone Museum. We’ll then shift our focus to Hammer Island, which is home to nesting Magellanic and gentoo penguins. Hiking the coast trail in spectacular Tierra del Fuego National Park, we’ll experience the wildlife magic of the subantarctic Magellanic beech forest. Our sea-based expedition begins aboard the

Chilean ship *Mare Australis*. Our 3-day voyage promises far greater comforts than Darwin experienced aboard the *Beagle*. We’ll travel through the Beagle and Murray channels and spend our days cruising the glacier-carved fjords of the Tierra del Fuego archipelago. We’ll explore and hike in Garibaldi and Pia fjords and navigate through spectacular Glacier Alley. Weather permitting, we’ll sail across Nassau Bay to Cape Horn National Park. Landing at Islas Hornos, we’ll climb to the monument at the Cape Horn summit. At Wulaia Bay, where Darwin landed in 1833, we’ll visit a former Yámana aboriginal settlement and hike through another stunning forest. To experience—by ship, Zodiac, and on foot—the dramatic fjords, magnificent glaciers, tumbling waterfalls, and verdant beech forests of Tierra del Fuego is an unparalleled opportunity. Disembarking at Ushuaia, we fly back to Buenos Aires, spending our final night celebrating our voyage In Darwin’s Footsteps!

**Price: \$12,995 (includes a \$1,000 deposit)**

**Group Size: 14      Trip Rating: 2**

**Price includes:** 18 days/17 nights, including all hotel/airport transfers, all ground transportation, all lodging, 3-day cruise in Tierra del Fuego (*Mare Australis*), all meals, services of 5 guides, all local guides/lecturers, all national park and museum entrance fees, and all gratuities. **Does not include** roundtrip airfare to Buenos Aires from your point of departure (✈✈ overnight flights depart US on 11/5 and arrive BA on 11/6; return flight from BA leaves on 11/22 and arrives in the US on 11/23), internal flights/airport taxes (≈\$800), or trip insurance. Trip cost is based on double occupancy; single accommodations are not available for this trip.



Mara (MH)

## CLOUD RIDGE STAFF & GUEST LEADERS

**Audrey Benedict** is the Founder and Director of Cloud Ridge Naturalists and the Publisher of Cloud Ridge Publishing. Her passion for geology and biology inspired a 45-year love affair with high mountains and the global ocean realm that has taken her from the Arctic to the Antarctic, as well as up and down the North and South American Cordillera. Audrey is the author of several books, including *The Naturalist's Guide to the Southern Rockies: Southern Wyoming, Colorado, and Northern New Mexico* and *Valley of the Dunes: Great Sand Dunes National Park and Preserve*, the latter a collaborative effort with photographers Bob Rozinski and Wendy Shattil. Her most recent book, with coauthor Joe Gaydos, is *The Salish Sea: Jewel of the Pacific Northwest*, a visually stunning and important conservation book designed, produced, and financially supported by Cloud Ridge's publishing team. Audrey serves on the Board of Directors for the SeaDoc Society. She divides her time between her Colorado mountain home near the Indian Peaks Wilderness Area and her tiny off-grid retreat on Frost Island in Washington's San Juan Islands.

**Dr. Geoff Hammerson** is Senior Research Zoologist for NatureServe and lives in Port Townsend, Washington. Geoff is the lead biologist on Cloud Ridge's naturalist team, helping design and guide our field discovery program around the world. He is the author of the definitive field guide *Amphibians and Reptiles in Colorado*, as well as *Connecticut Wildlife*. This Pacific Northwest "convert" is currently at work, with co-author Audrey Benedict, on a book about the Pacific Flyway. A superb zoologist, Geoff is always adding new dimensions to his natural history expertise. He's a popular instructor wherever he goes, teaching field biology and ecology at Wesleyan University and other institutions. Geoff is perhaps best known as an extraordinary observer of the natural world and for his remarkable talent in sharing these field experiences with audiences of all ages.

**Bob Rozinski & Wendy Shattil** are the rarest of species—full-time professional nature photographers. They've worked individually and as a team for more than 30 years and are known world-wide for their award-winning images and reputations as environmental photographers of endangered species and at-risk

ecosystems throughout North America. Fellows of the International League of Conservation Photographers, Bob and Wendy have produced twelve books, and their images have appeared in *National Wildlife*, *Audubon*, *Nature Conservancy*, *BBC Wildlife*, *Nature's Best*, *National Geographic* publications, and many others. Wendy also serves as the Project and Image Director for Cloud Ridge Publishing and brings her expertise and critical eye to everything we do. Dedicated to developing new ways of illuminating key conservation issues, Bob and Wendy are superb teachers and generous in sharing their expertise. To see more of their photographic work, visit their website: [www.dancingpelican.com](http://www.dancingpelican.com)

**Jennifer Hahn**, a naturalist, writer, illustrator, teacher, wild harvester, and coastal traveler, has over 30 years of wilderness travel experience. She has guided natural history trips by sea kayak in the San Juan Islands and Southeast Alaska for 22 years. She is the author of two books: the award-winning *Spirited Waters: Soloing South Through the Inside Passage*, based on her solo-kayak trip from Southeast Alaska to Washington, and *Pacific Feast: A Cook's Guide to West Coast Foraging and Cuisine*. Jenny teaches courses in wild foraging, indigenous plant uses, and seaweed biology as an adjunct professor at Western Washington University's Fairhaven College and other institutions. The expertise, poetic voice, and infectious enthusiasm she brings to her natural history teaching is a rare gift. Learn more about Jenny's work: [www.pacificfeast.com](http://www.pacificfeast.com)

**Carol and Carlos Passera** are naturalists and conservationists in the grand tradition. Their knowledge of Patagonia's natural and cultural heritage is unsurpassed. They live in Puerto Madryn, on Patagonia's Atlantic coast, and their world-renowned ecotourism company, Causana Viajes, creates and guides extraordinary natural history trips throughout Argentinian and Chilean Patagonia as well as in the Antarctic and Subantarctic. **Carol Mackie** is of Welsh/Scottish descent, her great great grandmother having been among the first Welsh immigrants to settle in Patagonia's Chubut Valley in the 1880s. The breadth of Carol's expertise makes her an inspiring tour leader. Her passion for all things "Patagonian" is absolutely contagious! **Carlos Passera** is a conservation journalist, a nature photographer, an Antarctic expedition guide and lecturer, and is the author of 3 books. Born and

educated in Buenos Aires, where he met and married Carol, Carlos fell in love with Patagonia in 1979. The focus of their professional lives changed forever when he accepted the Head Ranger position at the Punta Tombo penguin colony. Raising 3 young children and living remotely among several thousand Magellanic penguins is not for the faint hearted! Over the past 20 years, Carlos and Carol have worked tirelessly at the forefront of conservation efforts in Patagonia and well beyond.

**Sarah Drummond** is a naturalist and artist who grew up traveling with Cloud Ridge and is now a member of our naturalist team. Her B.A. from Maine's College of the Atlantic emphasized ecology, island ecosystems and art. Sarah's M.A. from Arizona's Prescott College focused on the role and impact of artists accompanying major exploring expeditions and was based on research gathered during a Watson Foundation year abroad. She works as a naturalist/kayak guide for Pacific Catalyst. Her illustrations are featured in several books and a recent book of block prints, *Raven and the Red Ball*, is a Pomegranate Books best seller. Sarah's artwork celebrates the beauty and diversity of the natural world. Visit her website: [www.sarahdrummondart.com](http://www.sarahdrummondart.com)

**Marilyn Hailbronner's** drawings—rendered in pen and ink, scratchboard technique, and color wash—grace Cloud Ridge's brochure and website. Her work as a naturalist artist is a reflection of her love for the natural world and her passion for conservation has taken her to wilderness areas around the world. To see Marilyn's artwork: [www.wildinkwell.com](http://www.wildinkwell.com)

## GUEST LECTURERS

**Dr. Joe Gaydos** lives on Orcas Island with his family and is a wildlife veterinarian and Chief Scientist for the SeaDoc Society, a nonprofit science-based marine conservation program of the UC Davis Veterinary Medicine/Wildlife Health Center. Joe has focused SeaDoc's research efforts on the ecosystem-level challenges facing the Salish Sea and has worked to improve management and policy decisions regarding the stewardship of those resources. He's coauthor, with Audrey Benedict, of *The Salish Sea: Jewel of the Pacific Northwest* and the two are currently at work on a children's version. Joe has published extensively on marine wildlife health issues for

such species as harbor seals, river otters, and killer whales. His passion for connecting people to the magic and vulnerability of the marine world is legendary!

**Russel Barsh** spent his Long Island boyhood on as a devoted beachcomber and fossil-hunter. As a doctoral student in paleontology at Harvard, he was mentored in multidisciplinary studies by the late Loren Eiseley and Stephen Jay Gould. His friendships with Native Americans opened his eyes to new science challenges, convincing him to get a law degree and defend the environmental integrity of traditional cultures. Russel taught at the University of Washington and helped develop its American Indian Studies Center. He served as an advisor to United Nations agencies on indigenous and peoples living in sensitive ecosystems, establishing the UN's Forum on Indigenous Issues. Russel co-founded Kwiáht (Center for the Historical Ecology of the Salish Sea) at the urging of his longtime friend and Samish Tribal leader, the late Ken Hanson. *Kwiáht* means "a clean place" in the Native American language of the Central Sound—a one-word mission statement embracing the use of science to inform and promote stewardship of cultural and biological resources in the San Juan Archipelago.

**Madrona Murphy** is a native Lopezian, whose love for the San Juan Islands eventually brought her back to Lopez Island after earning a degree in botany and political science at Reed College. With a special interest in plant genetics, she worked as a technician at the University of Washington's Center for Cell Dynamics at Friday Harbor Laboratories before establishing and managing Kwiáht's genotyping laboratory. Madrona uses her knowledge of how indigenous peoples used the land and shaped the ecosystems that we see today to inform her botanical surveys and her design of restoration projects. Her genetic population studies include work on local salmon, coastal cutthroat trout, camas, small mammals, and the rare Island Marble butterfly.



Rufous-collared Sparrow (MH)  
Patagonia, Argentina



## A WORD ABOUT EXPEDITION TRAVEL

Our expeditions are rated to assist you in choosing the trip that's right for you. Because of the moderate agility required on most expeditionary-class ships, on the *Westward*, in using sea kayaks, skiffs or Zodiacs, or on raft-based trips, participants with significant medical issues—physical disabilities, wheelchair-confinement, chronic heart disease and/or severe respiratory illnesses requiring supplemental oxygen, or any other known and potentially debilitating medical conditions—are advised **NOT** to register for these trips. By forwarding the registration form and your deposit, you are certifying that you are in good physical health and capable of performing all normal activities without assistance.

(1) **EASY:** Hotel, lodge, ship, or small boat-based trips, no camping, hikes of up to 2 miles, and minimal exposure to high elevations.

(2) **EASY TO MODERATE:** Lodge, ship, or camping based, hikes of 2-4 miles, sea kayaking, small plane travel, and moderate elevation gains.

(3) **MODERATE TO STRENUOUS:** Expedition ship, small plane, small boat or raft-based, remote wilderness localities, possible primitive camping, and trail or off-trail hikes of up to 6-8 miles.

(4) **STRENUOUS:** Expeditionary and rugged in nature, primitive camping, full-day hikes in steep mountainous terrain, as well as possible sea kayaking or whitewater rafting.

## REGISTRATION & PAYMENT

To register for one of Cloud Ridge's seminars, fill out the registration form and send it to us, along with your **nonrefundable** deposit. In the event a trip is full, we'll add your name to a wait-list and promptly return your deposit. The balance of all tour fees is due **90 days** prior to the trip departure date, unless otherwise noted or unless other arrangements have been made. Registrations received **within 90 days** of departure must include payment in full.

## TRIP CANCELLATION & TRAVEL INSURANCE

To protect your travel investment in the event of illness or injury to you or to a family member prior to or during a trip, we **strongly advise** that all participants purchase trip insurance, including a **trip cancellation/interruption policy** and/or **emergency medical evacuation coverage**. All international expedition outfitters **require** medical emergency/evacuation coverage. Emergency evacuation from remote wilderness areas is expensive and not included in standard medical insurance policies. Medicare does not provide coverage for individuals traveling outside the U.S. ***Please don't leave home without trip insurance!***

## OUR CANCELLATION POLICY

All cancellations must be made in writing. Because we must send payments to our travel suppliers well in advance of our departures, we cannot offer refunds beyond those described below. We appreciate your understanding! Cancellation refunds are made according to the following schedule:

- ◆ Cancellation received **90 days or more** prior to a trip's departure, all trip costs, less the deposit, will be refunded. The deposit will also be refunded if we are able to fill your space from a wait-list.
- ◆ Cancellation received **less than 90 days** prior to departure, no refund is possible unless we can fill your space from a wait-list.

## CONTRIBUTIONS

Cloud Ridge Naturalists is a nonprofit, tax-exempt 501(c) 3 organization providing educational opportunities in the natural sciences and financial support to entities and individuals conducting research in critical areas of conservation concern. You can become a Supporter (\$25) or a Sponsor (\$50 or more). We welcome your donations with gratitude. All contributions help support our conservation mission!

## GLOBAL OCEAN CONSERVATION SUPPORT

To support organizations involved in global ocean conservation, we recommend the following:

- ❖ **The SeaDoc Society** (nonprofit program/UC Davis Veterinary Medicine/Wildlife Health Center)  
[www.seadocsociety.org](http://www.seadocsociety.org)
- ❖ **Kwiáht: Center for the Historical Ecology of the Salish Sea** [www.kwiaht.org](http://www.kwiaht.org)

**NEED INFORMATION?** Visit our website at [www.CloudRidge.org](http://www.CloudRidge.org) for our 2016 trips, Field Notes, archived descriptions and images from previous trips, slideshows and video clips, and the latest offerings and books from Cloud Ridge Publishing.

### *Cloud Ridge Naturalists*

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**BROCHURE CREDITS:** Brochure design and text by Audrey Benedict. Editing by Alice Levine. Brochure and website artwork by Marilyn Hailbronner (MH) and Sarah Drummond (SD). Cloud Ridge's sage grouse logo is by Barbara Bash. Website photography by Audrey Benedict, Bob Rozinski & Wendy Shattil, or Geoff Hammerson.

