New Year's greetings to all! As 2011 begins, we reflect on the adventures, inspirations, and lessons of the previous year's journeys. This edition of Cloud Ridge Field Notes is inspired by the final trip of our 31st year, "In Darwin's Footsteps," the first of a pair of trips designed to retrace naturalist Charles Darwin's famous voyage in the survey ship Beagle around South America between 1831 and 1833. In November 2010 Cloud Ridge revisited several stops on Darwin's route south along the coast of Argentine Patagonia. These included Buenos Aires, Bahia Bustamante, Puerto Deseado, Puerto San Julian, Puerto Santa Cruz, and El Calafate. The journey culminated with a magnificent four-day cruise from Ushuaia to Punta Arenas (Chile) around Cape Horn and through the labyrinth of islands at the continent's southernmost tip known as Tierra del Fuego. "In Darwin's Footsteps, Part II" will follow the expedition's route north up the Chilean coast and is scheduled for Dec. 2011.

During the Beagle's five-year voyage Darwin circumnavigated the globe, pondered the formation of coral atolls, rhapsodized over the diversity of tropical forests, and explored a wide range of environments. Yet in the final chapter of The Voyage of the Beagle, his published account of his journey, he chose to return to Patagonia's dry eastern steppe: "In calling up images of the past, I find that the plains of Patagonia frequently cross before my eyes; yet these plains are pronounced by all wretched and useless. They can be described only by negative characters; without habitations, without water, without trees, without mountains, they support merely a few dwarf plants. Why then, and the case is not peculiar to myself, have these arid wastes taken so firm a hold on my memory?" Perhaps the answer lies in the exhilarating and overwhelming sense of space created by those seemingly endless plains, and in the astonishing profusion of life along the desolate-looking coastlines.

Much of what Darwin wrote about Patagonia in the 1830s is still applicable today. From a conservation standpoint, the region's aridity and harsh environment proved to be its greatest asset. With very little surface water and arable land to attract settlers Patagonia remains, in the words of our guide Carol Passera, "one of the wildest places on earth." Towns are small and far between and the entire region is very sparsely populated. While Darwin and his contemporaries would have no trouble recognizing geological landmarks and the overall character of the land and coast, colonization and increasing human populations wrought environmental changes in Patagonia as in the rest of the world. Sheep ranching has had one of the greatest impacts in the form of overgrazing, topsoil damage from concentrations of cloven hooves, and out-competition of native grazers like the guanaco and rhea. Many native species are still hunted for food and for leather products. Coastal sea lion and seabird colonies have survived extensive harvests in the past two hundred years and today face ever-increasing pressure from commercial fishing operations and the hazard of oil spills. Finally, a growing human population puts pressure on limited water and habitat resources. We saw evidence of all of these issues during our two-week sojourn, but also of a healthy local conservation initiative; people who appreciate the unique diversity of their homeland and are committed to convincing fellow citizens, Argentina's government, and international visitors that Patagonia is anything but a "wretched, useless plain."

Our very first destination in Patagonia offered a wonderful example of an alternative use of tourism to promote preservation. In 1953 Lorenzo Soriano founded the tiny "algae town" of Bahia Bustamante on the coast north of Comodoro Rivadavia to harvest wild seaweeds for sale to culinary and cosmetic industries. Today Lorenzo's
grandson Matias Soriano runs Bahia Bustamante as an eco-friendly tourist destination and educational facility as well as continuing to operate the family seaweed processing business. Later on we witnessed the impact of international concern to preserve a diversity of habitats at Parque Nacional Monte León, formed from land purchased and donated by Doug and Kris Tompkins, co-founders of Conservacion Patagonica, as Argentina's first coastal national park. In a variety of locations we were impressed by the knowledge, sensitivity, and enthusiasm of our local guides as they eagerly shared their expertise and expressed genuine delight at our interest in their country. In Puerto Deseado we were fortunate enough to attend a presentation by Marcos Oliva Day, a local resident and founder of an educational program called "Conociendo Nuestra Casa" or "Getting to Know Our Home." His mission is to reacquaint children and adults with the natural and cultural history of their country and consequently to foster respect for land and sea.

Interestingly, twenty-five years ago Marcos Oliva Day also discovered a nesting colony of rockhopper penguins on Isla Pingüino, a protected island and breeding area for Magellanic penguins south of Puerto Deseado. Rockhopper populations in the Falkland Islands have been decreasing, so it's possible that this new colony is a result of penguins migrating north due to fishing-induced food shortages around the Falklands. At the same time many mainland penguin colonies in Argentina, like the one at Parque Nacional Monte Leon, are declining in size. Dr. Dee Boersma, who has researched Magellanic penguins at Punta Tombo for over twenty years, suggests that another factor might be increasing populations of terrestrial predators. From the colonial era through much of the twentieth century, estancia owners aggressively hunted natural predators considered to be a threat to their sheep, like puma and foxes. In estancia lands converted into protected areas where hunting is forbidden, predator numbers are now on the rise. At Monte León, which has a high puma population, we found puma scat composed almost entirely of penguin feathers and bones. Our ranger guide confirmed that pumas are increasingly preying on the colony. For me this was a reminder that all our human activities have broad ramifications and sometimes unexpected results, and reinforces the importance of learning from the past and examining all aspects of a situation.

Below are a few vignettes of Darwin's experience paired with my own impressions of several places we visited.

**PUERTO DESEADO**

Darwin's *Diary*, Port Desire (Puerto Deseado), December 24, 1833: "I thought I had seen some desart looking country near B. Blanca; but the land in this neighbourhead so far exceeds it in sterility, that this alone deserves the name of a desart. The plain is composed of gravel with very little vegetation & not a drop of water. In the vallies there is some little but it is very brackish."

Puerto Deseado is indeed "desart" country with no natural trees and a landscape dominated by dark maroon basalt rock formations. Yet the "Ria Deseado" (a river channel invaded by the sea for over 40 kilometers inland)
boasts an extraordinary proliferation of wildlife. During our first afternoon excursion we see cliff nests of gray and rock cormorants used so long that centuries' worth of guano deposits have built up into formations worthy of a limestone cavern. Magellanic penguins bob in the milky-green water and waddle out to nest on low islands, while tiny Commerson's dolphins repeatedly join our inflatable boats to cavort in our bow and stern wakes. Forty-three km up the Ria, the massive "Sundial Rock" immortalized in Beagle artist Conrad Martens' painting still stands in a landscape identical to that depicted one hundred and seventy-seven years ago. Nearby in the moist sand of the floodplain we encounter a remarkably clear set of puma tracks, indicating where the animal had recently descended to shore to examine an old guanaco carcass.

**SAN JULIAN**

Darwin's *Voyage of the Beagle*, pp. 156: "The Gauchos, or countrymen, are very superior to those who reside in the towns. The Gaucho is invariably most obliging, polite, and hospitable: I did not meet with even one instance of rudeness or inhospitality. He is modest, both respecting himself and country, but at the same time a spirited, bold fellow."

Throughout our journey south and during the previous trip which focused on traditional Andean textiles we had extraordinary opportunities to connect with local townspeople, ranchers, and researchers. On our last evening in San Julian we are treated to a traditional asado (barbeque) at the community center. Multi-lingual conversations fly back and forth between visitors, asadors (grill-masters), and women preparing salads in the kitchen, while young participant Fernando and I chat with our bus driver and attempt to translate jokes back and forth from English to Spanish. After dinner, a gracious young couple performs several traditional Argentine country dances, and our asador shows off his typical gaucho gear: belts, knife, and hat. I know we all feel privileged and honored to be so included, and many members of our group eagerly join in the dancing, musical jamming, and storytelling that follows dinner.

**WULAIA**

Fitzroy's *Narrative*, January 23 1833: "We were much pleased by the situation of Woollya, and Jemmy was very proud of the praises bestowed upon his land. Rising gently from the water-side, there are considerable spaces of clear pasture land, well watered by brooks, and backed by hills of moderate height, where we afterwards found woods of the finest timber trees in the country. Rich grass and some beautiful flowers, which none of us had ever seen, pleased us when we landed, and augured well for the growth of our garden seeds."

Wulaia remains a sheltered haven in the forbidding landscape of Tierra de Fuego. Despite the addition of a tiny radio communication station the land retains its wild isolation and its topography would be instantly recognizable to Darwin, Fitzroy, or Jemmy Button, their Yamana companion. We are lucky enough to visit Wulaia on a calm, warm day and hike up one of the "hills of moderate height" overlooking the bay. Our trail winds upward through typical Fuegian beech woods and low Notro bushes smothered with vermillion flowers. Halfway up the forest is interrupted by a pond and numerous downed trees, the work of beavers unfortunately introduced to Tierra del Fuego as a fur resource. Gathering storm clouds and a reconstruction of a Yamana brushwood shelter provide a poignant reminder of the extreme conditions in which Jemmy Button's people survived.

Note: quotations on the next page are taken from the following edition:
"We saw also saw a couple of Zorillos, or skunks, -- odious animals, which are far from uncommon. In general appearance the Zorillo resembles a polecat, but it is rather larger, and much thicker in proportion. Conscious of its power, it roams by day about the open plain, and fears neither dog nor man*. Certain it is, that every animal most willingly makes room for the Zorillo." pp. 78 - 79

* nor tour bus

"There is one vegetable production deserving notice from its importance as an article of food to the Fuegians. It is a globular, bright-yellow fungus, which grows in vast numbers on the beech-trees... It has a mucilaginous, slightly sweet taste, with a faint smell like that of a mushroom. With the exception of a few berries, chiefly of a dwarf arbutus, the natives eat no vegetable food besides this fungus." pp. 237 - 238

"When the condors in a flock are wheeling round and round any spot, their flight is beautiful. Except when rising from the ground, I do not recollect ever having seen one of these birds flap its wings." p. 186

"The guanaco, or wild llama, is the characteristic quadruped of the plains of Patagonia; it is the South American representative of the camel of the East. It is an elegant animal in a state of nature, with a long slender neck and fine legs." p.166

"... since these shells lived in a moderately deep sea, it can be shown that the area now occupied by the Cordillera, must have subsided several thousand feet... Daily it is forced home on the mind of the geologist, that nothing, not even the wind that blows, is so unstable as the level of the crust of this earth." p. 323