

## Travels with my Father

### The Galápagos and The Voyage of the Samba

I was on the deck of the Samba just as the sun rose. It is not a brilliant sunrise, there is a haze on the ocean this morning, but I was on deck because it was my first morning in the Galápagos. Some of the early English cartographers labeled the islands "Inchanted" (Enchanted), this was probably not a term of endearment - until recent eco-tourism. Enchanted is also bewitched and beguiled. This is a place where there are primordial monsters and micro dragons. It is also a place which bewitches the people who visit it, and the animals which call it home.

But I am not here and this hour of the morning to be bewitched. I am here for a complexity of reasons which start with my father's desire to see what Darwin saw. It reaches through Darwin seeing, not at first, animals which had evolved to fit their environment, but why here? In part it is this unique location, these most remote islands. The islands? They arose from volcanos and plate tectonics. So I am here today because when the Earth stretches and creaks, the plates which form its crust mis-match here, grinding together and forming a curious, peculiar world. This is a world a long ways in kilometers and temperament from New Hampshire...

#### Friday & Saturday, January 22 & 23, 2010

*Hanover, NH - Palm Coast, FL*

I left the house at 6:30 in the morning. It was dark and 15-degs outside. The neighborhood is quiet, with only two women out walking their dogs. As I crossed campus I met a few student-athletes headed to the gym for their seven o'clock workouts, but the town still feels very much asleep as I climb onto the bus and slip off towards the equator.

Today's travels are eventless, with busses and planes keeping to the script. Hanover to Boston, and then a flight to Charlotte and a second flight to Jacksonville where my folks met me and carried me off to watch my niece play soccer.

The next day we talked and walked at Washington Oaks and along the beach. We packed and talked some more. It is the eve of the trip. I am leery of calling it an "adventure", even if the tour agents like that term, because I don't foresee much chance of hazard. But there is an element of unknown - at least unknown to me. That might make it into a personal exploration. The Galápagos may be well charted, but I don't really know what to expect.

To my father I think it is more of a pilgrimage. I don't think I understood that at first. I thought it was a birding trip.



Where all trips start

#### Sunday, January 24, 2010

*Palm Coast, FL - Quito, Ecuador*

Mom always puts together a good breakfast, today's was scones and oranges, and it starts to occur to me that on this trip it will be easier to eat, even over eat, then to exercise.

The trip to Jacksonville Airport is simple. The day is bright and the traffic is clear, it being a Sunday morning. Mom drops us off at 9:30 and we check-in and then wait. We have a short flight to Miami and then in the afternoon we fly off toward Ecuador. I think this is really where the 'adventure', or 'personal exploration' begins. My all time favorite name of an expedition was the 'Corp of Discovery', the Lewis and Clark expedition across the Louisiana territory to Oregon. What do you call it when you discover something for the first time for yourself? To be enlightened? To have my eyes opened? Maybe this is a voyage of personal enlightenment?

Half an hour after leaving Miami we are soaring over Cuba, and an hour and a half beyond that we cross Panama. Our flight from Miami to Quito is about 2,900 kilometers (1,800 miles), which really is not that far. The distance to Los Angeles is 3,800 km, to Albuquerque is 2,700 km. But I think it must be a different world as we fly on into the darkness.

I am told that landing in Quito can be quite dramatic, for you are flying over the Andes and then you drop precipitously into the Quito valley. But this was lost on us, for it was dark. We dropped through some clouds and there was a city before us, with yellow street-lights which could be anywhere. I can tell that it is hilly, but I think I'll need daylight to really see where we are.

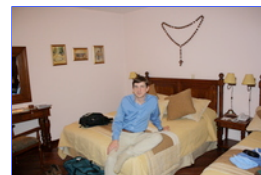
It was a long line to get through passport control and immigration. A youth soccer team is sharing the line with us. They all have "Ecuador" written on their jackets and jerseys, so they must be returning home. Finally we collect our bags and step out beyond the last inspectors. Sophia, our tour guide, is there to collect us. She calls our driver, Carlos, on her cellphone, and he soon scoops us off the curb and carries us to the old city and our hotel.

The city is just a blur of lights at this time of night to the weary traveler, and soon we are deposited at the "Patio Andaluz". I understood the "Patio" part of the name of the hotel immediately. There are two courtyards in the middle of the hotel. The building is about 400 years old, at one time a great colonial house when Quito was a provincial capital in the Spanish Empire. But the "Andaluz"? By 1730 it had this name. Andaluz is the dialect of Spanish spoken in the southern extreme of Spain, an area from which many of the Spanish in South America came.

Today the courtyards - or patios - are covered with glass. The wide balconies are walkways and lounge spaces filled with tapestry covered sofas and armchairs where I sat and wrote in my journal.



Tim & Del - ready to fly



Tim in the hotel room

**Monday, January 25, 2010**

*Quito, Ecuador*

We had breakfast at the hotel, eating in one of the covered patios. Omelets, papaya, pineapples and coffee. We then had some extra time before we were to meet our guide. So we walked two blocks down to the Plaza Grande, the center of the old town. The sun is out and the sky is blue, and there are a lot of people enjoying the plaza. People on their way to work or school or shopping pass through the square. Some who have more time, like us, sit on the benches and enjoy the sunshine and the flowers.

Back at the hotel we met Sophia, who walked us back to the plaza to start our tour. On the north side of the Plaza Grande is the archbishop's palace. A large part of it is now shops and restaurants. We walked through a few patios/courtyards. The shops spill out onto the balconies all around us.

To the south of the plaza is the Cathedral, to the east the new city hall and to the west the President's Palace, which dates back to the time of the Spanish Empire when it was the home of the governor. In the middle of the plaza is a monument to the "Heros of the Tenth of August, 1809". This refers to the fact that Quito declared its independence from Spain at that time. Independence last only two months, but Quito acquired its nickname, "Luz de América" ("Light of America") at that time.

The Battle of Pichincha, on the slopes of a volcano which shadows the city, took place on May 24, 1822. That battle was the turning point of the war for South American independence.

The Plaza is now full of a number of school groups. Every school has its own unique colors for their uniforms, and we are almost run over by a flood of red wool sweater clad fourth graders on their way to the President's Palace. We tagged along behind and looked around the palace's courtyard.

We looked into "El Sagrario", which was the main chapel of the Cathedral, but a service was just starting, so we crossed the street and went through the national cultural center. This used to belong to the Jesuits, but they were too liberal and it was taken away from them to become a university and now contains the national library.

Next to it is "Iglesia de la Compania de Jesus", I have never seen so much gold. Every chapel, nook and scone is filled with wooden carvings which are then covered with gold leaf, from floor to towering ceilings.

We wound our way up the hill for a block to the Convent (Monastery) of the Franciscans. Again a beautiful chapel and a pleasant cloister. I love quiet courtyards and cloisters. I forget that until I return to one and I think what an important piece of geography for a contemplative life it is.

We met Carlos next to San Francisco Plaza and he took us in the car up a hill called "El Panecillo", little bread, because it is shaped like a loaf. On this hill is a huge statue of the winged virgin Mary, 40 meters tall. The hill itself affords a good view of the city. I am surprised to see that the city isn't really in the bottom of the valley, but rather on a shelf on the side of the valley. The old town's "shelf" is perhaps 2 kilometers on a side. I expect that it was a better defensive position than the valley floor.

We now headed to "Mitad del Mundo", "The Middle of the Earth", the equator monument. The Spanish word for equator is "Ecuador", which is almost never used to describe the line because of confusion. The Mitad del Mundo is about 25 km north of the center of Quito.

There is a large monument here where the Charles-Marie de La Condamine expedition of 1735 surveyed the equator. Ironically the government built a huge monument here in the 1980's, only to discover, via GPS, that the equator is really 280 meters north of here.

At the GPS equator there is an ethnic museum with huts from the rainforest and shrunken heads. There is also a display on the equator line meant to demonstrate the power of the equator - in particular the Coriolis Force. The display here reminded me a lot of "Magnetic Hill" in New Brunswick, we can easily be deceived. The guide let a basin drain on both sides of the equator, with it swirling in opposite directions on the different sides of the line. The direction of the swirl in the drain was given by the direction the tour guide twisted the basin when she set it down, north or south of the equator.

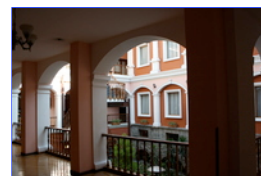
At the 1735 monument I enjoyed the display about the French expedition including a copy of a map of Condamine's geodesic survey.

We were dropped off at our hotel and then had lunch at a restaurant on the upper balcony of a courtyard in the archbishop's palace, at a place called "Hasta la Vuelta Señor", (Until I come back Lord), some very good soups.

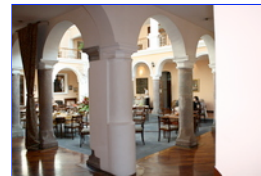
Later in the afternoon we ventured out on our own to the north, to the "Basílica del Voto Nacional". On route we walked past a number of tiny, curious shops. In one a woman was upholstering a chair, in a second a cobbler was re-soling shoes. In one a furniture maker was surrounded with a great pile of shavings from planing wood. There were also a great number of candy and newspaper shops.

The Basilica is a great gothic building which would not be out of place in Europe - except for the gargoyles which are all new world animals. Aardvarks, jaguars, rams and maybe even a spiny porcupine.

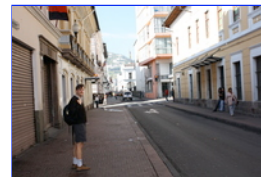
On the way back to the hotel it started to pour. By keeping to the windward side of the street, and huddling under the eaves of the buildings we stayed fairly dry. It was also rush hour, with lots of traffic headed home. But the driving rain kept down the black oily clouds of smoke from the busses grinding their way uphill and home.



Patio Andaluz - by our room



Patio Andaluz - Dinning



Steets of Quito



Plaza Grande



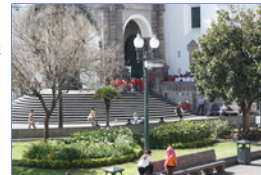
Sophia & Tim - Plaza Grande



The Cathedral



The President's Palace



The Plaza and school children by the Cathedral

Back at the hotel we talked, sipped tea and had a late dinner. I took one more stroll around the Plaza Grande before retiring for the night. I feel much more comfortable in Quito now than I did 24 hours ago. Couples and families are sauntering through the plaza after being out for dinner. A bunch of teenagers asked me the time and I showed them my watch. And then to bed.

### Quito & Ecuador

I was pleasantly impressed with Quito. In many respects it reminded me of Italy, I think it is the stucco and the thick stone walls which seem Mediterranean. The narrow streets even in the suburbs are European like. But unlike Italy, it is very clean, and it is a bit more foreign exotic than north Europe. There is not nearly as much English. However, if I wanted to get out of the English speaking world, I would now think of visiting here. We are also in a broad valley which runs through Ecuador, but beyond it I see the towering Andes, and I want to go and climb!



School children invade the President's Palace



National Library/Cultural Center



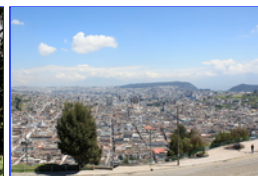
Iglesia de la Compania de Jesus



Convent (Monastery) of the Franciscans



cloister in the monastery



Quito from El Panecillo



Winged Virgin Mary 40 meters tall



Rainforest Hut at Mitad del Mundo



GPS Equator at Mitad del Mundo



1735 Equator at Mitad del Mundo



Lunch at Hasta la Vuelta Senior



Basilica del Voto Nacional with Gargoyles



**Tuesday, January 26, 2010**

*Quito - Galápagos*

*Balra*

*South Plaza*

*Puerto Ayora*

We were being picked up early, so rose early, packed, had breakfast on the patio, checked out and were ready for Sophia and Carlos before 7:00. As we waited we watched the kids outside the hotel walking to school. Going north were girls all in the same school uniform; blue blazers, white blouse, grey skirt, white knee socks and black shoes. Occasionally boys in dark grey headed in the other directions. We must be near the girl's high school.

Sophia and Carlos fetched us a bit before 7:00 and whisked us off to the airport. As we drove through the old city and thought to myself that you could probably figure out what part of the city you were in if you know the color code of the school uniforms.

The first leg of the trip was a flight to Guayaquil, and city on the coast of Ecuador. Most of the flight was above clouds, but occasionally a truly magnificent peak, a volcano, would thrust its head up through the clouds, and island in the sea of white. Chimborazo, 6,268 meters, may be the spot on Earth further from the center of the planet, because the earth bulges around the equator. These glacier clad, equatorial mountains must truly tower.

After a forty minute stop in Guayaquil we are headed west over the Pacific, bound for the Galápagos. The airplane touches down on Baltra where we meet our naturalist and the rest of our traveling companions. If this was a novel I would introduce them here. But I don't not yet know who they are. I'll try to introduce them throughout this journal as I figure them out.

We were shuttled to the waterfront by bus, and then to our boat, the Samba, by zodiac. While we had lunch the crew weighted anchor and the Samba made its way around the north end of Baltra. Baltra is a small island, maybe only five kilometers long. We sailed through the "Canal del Note", which separates it from the island of Seymour, and then steered south. People had a hard time finishing lunch with the constant interruption; "Isn't that a storm petrel?", "... a shearwater?", "... a frigatebird". With a wingspan of up to two and a half meters (eight feet), the Magnificent Frigatebird real does deserve that title.

Sitting out on the deck I thought to myself - Kristina would have liked to be here. It is warm in the sunshine. The wooden deck feels good on bare feet, feet which have not been outside of shoes for months and months. (Is it really January?)

After about two hours of motoring we drop anchor by the island of South Plaza and made our first excursion to shore. This was a "Dry Landing", meaning that there was a small stone jetty to step out on, ideally leaving your feet dry. But on the jetty we needed to step around sea lions. We were also greeted by sally lightfoot crabs and marine iguana. Within ten meters of the docks we added land iguanas, lava lizards and finch.

The iguanas are amazing. Ugly - maybe, dragon-like - absolutely. And they just sit there. You can walk up to them and stare them in the face - if you are brave enough. Just before starting this trip I had watched a BBC program on the Galápagos. I had been impressed by the animal photography. I am much less impressed now, for the animals are numerous, conspicuous and completely un-afraid of humans.

We crossed to the south side of the island. The day is in the mid-80's (F). The sun is brilliant, but not as hot as I thought the equator would be. On the south side of the island we are on the top of a cliff face. All of Isla Santa Cruz stretches to the south by south west, and Isla Santa Fe is twenty kilometers to the south east.

We walked slowly along the top of the cliff face, cameras clicking all the way. Dad tells me that this is a birder's pace. Below us flies a red-billed tropicbird - a type of gull with long tail feathers, brown pelicans, blue-footed boobies and nazca boobies. Then swallowed-tailed gulls, ruddy turnstones, wandering tattler and a yellow warbler. We picked our way slowly up the trail, watched iguanas devour yellow flowers, and eventually stopped by a pile of white bones - an old sea lion.

The return to the Samba was faster than our walk out. The sun was heading towards the horizon.

Once back on board, the boat headed south towards Puerto Ayora. The sun had set by the time we dropped anchor in Academy Bay. It was also time for formal introductions of the crew. Captain, First Mate, Second Mate, Engineer, Cook (Chef) and Stewart as well as Mónica our Naturalist. We then had dinner and talked into the evening about today and tomorrow.

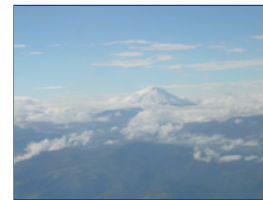
I took my tea out on deck. Academy Bay is very full and active even in the evening. I think this is the home port of many of the tour boats, and Puerto Ayora is the home of a lot of the crew. So there is shore leave tonight. The town has about 1,600 people. I expect most of them are related to tourism. Tomorrow we shall see.

### The Galápagos National Park

I think that the Galápagos National Park has a hard job trying to balance the pressure of human wants and needs, against the protection of this natural treasure. In 1959, when this park was set up and the Galápagos were only remote desert island, the task may not have seemed so daunting. In 2000, 70,000 tourist were visiting the Galápagos, by 2008, over 170,000 people visited the islands. That is almost 500 people a day descending upon this fragile environment.



Jan 26 - Day 1



Chimborazo, 6,268 meters



Dad and Crossword Puzzles



Baltra



Landed in the Galapagos



Magnificent Frigatebird



Frigatebird over the Samba



Sea Lion



In 1959 it was clear that the islands could only support a limited number of people, there was only so much water. But with desalination technology this wouldn't limit growth. I worry about pressures. I delight in having been privileged to visit, but I still worry.

We paid a \$100 fee to enter the islands, and were issued a license to be here. We are also required to always be with a guide, and a guide can never have more than fourteen visitors with them. I have also learned that Mónica, our guide, is a third level naturalist, which is the top rating. I do think these sorts of controls are necessary.

The park also restricts where we land and where we walk. The trails are marked out with black and white post. The route of our ship is a registered itinerary, our landing times are controlled to spread out the crowds. Crowds? I hardly saw any. But there are over 3,000 visitors at any time in the archipelago.

On top of trying to control human impact, there is trying to restore the island to what they were like before humans. This is a task the national park shares with the Charles Darwin Research Station. Remove the invasive species - especially goats, cats and rats, and rebuild the tortoise and other native animal populations.

It is a hard task and I will gladly pay my fee.

South Plaza	
<i>Magnificent Frigatebird</i>	<i>Sally Lightfoot Crab</i>
<i>Red-billed Tropicbird</i>	<i>Galápagos Sea Lion</i>
<i>Galápagos Storm Petrel</i>	<i>Land Iguana</i>
<i>Galápagos Shearwater</i>	<i>Marine Iguana</i>
<i>Brown Pelican</i>	<i>Lava Lizard</i>
<i>Blue-footed Booby</i>	<i>Galápagos Green Turtle</i>
<i>Nazca Booby</i>	<i>Yellow-tailed Surgeon Fish</i>
<i>Swallowed-tailed Gull</i>	<i>Trigger Fish</i>
<i>Ruddy Turnstone</i>	<i>Angie Fish</i>
<i>Wandering Tattler</i>	
<i>Yellow Warbler</i>	
<i>Small Ground Finch</i>	



Sea Lion on the South Plaza Jetty



The Samba



Iguanas and Prickly Pear Cactus



Land Iguana



Prickly Pear Flower



Land Iguana in a Bush



Our Group



Red-billed Tropicbird



Tim on Clifftop Path



Samba at Anchor



South Plaza Cliffs



Del, South Plaza & Samba



Sea Lion



Iguana

**Wednesday, January 27, 2010**

*Puerto Ayora  
Santa Cruz*

I awoke at 6:00 and sprang out of my bunk. It is first light and the cool of the day and the Samba is still asleep. But to be on deck!

The harbor is packed with boats. Tour yachts like ours, although most are bigger, and a number of private boats. There are work boats as well; fishing and cargo. Off our starboard bow is a great three masted schooner. It appears neglected and derelict, but by mid morning it is swarming with workmen who are restoring it.

Everyone was up by 7:00 and after breakfast we boarded the panga and headed to shore. The pangas are inflatable boats which I've always called zodiacs, and are our ride to shore. I think we will climb in and out of them at least four times a day. Heading across the harbor we weave our way among water taxis, boats, ships and more pangas.

We landed at the Charles Darwin Research Station and I started writing down the names of animals in my pocket notebook. It became evident to me early on that I was traveling with a group with a lot of birding experience and that I could offer little in spotting and identifying birds, but I did have the ability to record, and that could be my contribution to the collaborative effort. I wouldn't repeat the list here because it is long and appears elsewhere, but it does include mangroves, iguanas, sea birds, finches, mockingbirds and more.

The most interesting part of the research station is the captive tortoise breeding program. The tortoise population has been decimated, first by sailor who would stock up their ship with tortoise. A tortoise could stay alive in the hold of a ship for up to a year without food or water, and thus provide the crew with fresh meat. But even after the eating of tortoises stopped the animal faced a second problem, rats. Rats, which had been introduced to the island by ships would dig up and eat tortoise eggs. So at the Darwin Research Station they breed tortoises. From eggs to one year old in a protective box, up to age three in a cage. At three they are returned to the beach from where their stock came.

They are also pens which contain a few adults, the breeding stock. This includes "Lonesome George", the last of his species. For each island has evolved its own subspecies of the giant tortoise.

After visiting the research station Dad and I walked through the town of Puerto Ayora where we bought postcards and sunscreen. At the fish market a man was butchering a large fish with a massive knife. A number of tourist were watching the man, and a number of locals watching the tourist. I was watching everyone - and wondering who was watching me.

At the far end of town - after Dad mailed his postcards, we meet the rest of our group and the panga picked us up and took us out to the Samba for lunch. After lunch we were shuttled ashore again where we boarded a bus to go inland. We rolled out of town and headed north. The town becomes a series of building projects. Cinder blocks, rebar and cement, buildings half build and some half occupied.

At the village of Bellavista we left the main road and headed east. Our road became smaller and smaller at each fork. We are also gaining elevation and have left behind the cactus and have entered a lush area, the cloud forest. When clouds sweep across the pacific then can pass over the low lands without dropping any waters, but when they collide with these highlands, they is that oh so precious rain. This area has farms and grazing cattle. In one stretch of forest I notice the the underbrush has been cut down and bananas and coffee have been planted in a mixture under the protective canopy. This is the "inter-cropping" which Doc Innis, my geography professor from Geneseo use to talk about.

Just before reaching our destination we are halted by a Giant Tortoise crawling across the road. The bus stopped and we all piled out. The tortoise somehow seems more impressive as it creeps down the road then it did at the research station.

Finally we reached the nature reserve and when up on top of a cinder cone. "corn" cinders, because of their size. It is a delightful view of the east side of the island. To the north we can see Baltra where we landed yesterday. To the east is South Plaza, and to the south Puerto Ayora. To the west, rising up 300-400 more meters are the highest of the highlands of Santa Cruz.

We walked back to a cauldron which drops about a hundred meters below us to a lush floor. This is where a massive underground chamber one collapsed. Along the side of the trail we find where a tortoise has pushed its way into the bushes and settled down to sleep for the night.

Back at the trail head we stop for tea, coffee and popcorn, then take the bus back to Puerto Ayora. A volleyball game is going on next to the dock with a good size crowd watching.

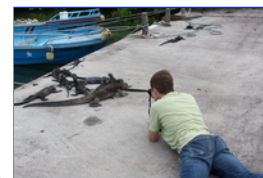
The panga fetched us back to the Samba where I watched the sun set. We will sail in the middle of the night, so this is the last time I will see Puerto Ayora and Academy Bay. Again, after supper, we compare notes and talk about tomorrow. People have noticed that I am keeping a list of all animals, and so instead of resorting to memory, I find my list consulted.

### Human History

In 1535, the bishop of Panama was on rout to Peru when his ship was blown off course and landed on these islands. They were marooned there until the winds shifted, and a number of that party died due to the lack of water. The Galápagos were not seen as a paradise.



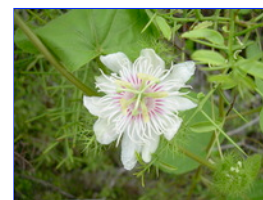
Jan 27 - Day 2



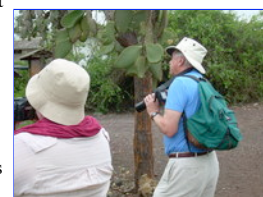
Thomas & Iguanas



Charles Darwin Reserch Station



Flower



Lynda and Del Watching a Finch



Darwin's Finch



Another Finch



Giant Tortoise

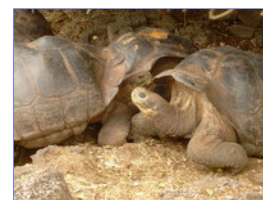


By 1570 the islands were showing up on maps as "Insulae de los Galopegos", the "Islands of the Tortoises". The tortoise is a great draw to these islands. Ships bound across the Pacific would fill their holds with tortoises, for a tortoise could go for a year without food or water. So if you have stowed one down below, you have fresh meat for a year.

English privateers used these islands as a base to raid the Spanish gold fleet sailing from Peru to Panama in the seventeenth century. Also whalers and merchants used these islands to resupply before crossing the vast Pacific in the eighteenth and nineteenth century. Darwin was not the first here.

Early sailors were known to leave goats on islands. The idea was that you could return later and hope to find a goat colony waiting to be harvested. In addition rats and cats were left here, probably not as part of a plan. These introduced species caused havoc with the local fauna, from which the islands and their managers are still trying to recover.

Charles Darwin Research Station	Afternoon in the Highlands of Santa Cruz
<i>Great Blue Heron</i>	<i>Cattle Egret</i>
<i>Lava Heron</i>	<i>Galápagos Rail</i>
<i>Whimbrel</i>	<i>Smooth-billed Ani</i>
<i>Galápagos Mockingbird</i>	<i>White-cheeked Pintail</i>
<i>Smooth-billed Ani</i>	<i>Galápagos Dove</i>
<i>Small Ground Finch</i>	<i>Woodpecker Finch</i>
<i>Medium Ground Finch</i>	<i>Small Tree Finch</i>
<i>Large Ground Finch</i>	<i>Yellow Warbler</i>
<i>Cactus Ground Finch</i>	<i>Galápagos Mockingbird</i>
<i>Marine Iguana</i>	<i>Moorhen</i>
<i>Sally Lightfoot Crab</i>	<i>Giant Tortoises (Domed) [G. nigrita]</i>
<i>Yellow-tailed Damsel Fish</i>	<i>Monarch Butterfly</i>
<i>Rainbow Wrasse</i>	
<i>Pufferfish</i>	
<i>Button, Red, White &amp; Black Mangrove</i>	
<i>Candelabra Cactus</i>	
<i>Giant Prickly Pear</i>	
<i>Galápagos Passion Fruit</i>	
<i>Bitterbush</i>	
<i>Incense Tree</i>	



Breeding Tortoises



In the Tortoises Pen



Delmont in Puerto Ayora



Tim &amp; Del on Waterfront



Schooner Being Rebuild



Boats in Puerto Ayora



Tortoise by the Road



Del, Cloudforest to Ocean



Finch Next



Poison Apple Fruit



Old Cauldron



Tortoise Asleep



Sunset across Puerto Ayora

Sunset from the aftdeck  
of the Samba



**Thursday, January 28, 2010**

*Isla Española  
Gardner Bay  
Isla Gardner  
Punta Suárez*

It is about 160 km (100 miles) from Santa Cruz to Isla Española and the Samba made this passage in about seven hours, dropping anchor in Gardner Bay at 5:30 in morning. This pattern, exploring islands in the day and traveling at night, was to become common on this voyage.

I arose at 6:30, we breakfasted and then took the pangas to Gardner Beach. This is a beautiful, pristine, white "Organic" beach. Here the word organic means that the 'sand' is made up of ground coral and seashells washed up from the ocean floor. The alternative would be a black, volcanic beach.

We had a "wet landing", which means that there was no jetty and we waded ashore. Mónica lead a group birding along the beach. I tagged along for awhile, and then walked the length of the beach alone. One had to tip toe around the sea lions who lay about in the middle of the beach, unconcerned about humans. There are also two other boats in the bay, and about thirty tourist from those boats on the beach this morning. But the beach is long and spacious.

I spotted a green sea turtle swimming, and noticed their tracks from last night when the turtles had crawled across the beach and buried eggs above the highwater mark.

At the far end of the beach I crept up on sally lightfoot crabs and marine iguanas. It is amazing how close you can get. A galápagos hawk was soaring overhead.

We were back on board for a snack (how much weight will I gain) and then we were snorkeling over a lava reef next to Gardner Island, on the outer edge of the bay. A dozen types of fish, starfish, sea lions and rays. I tend to miss the names of fish since I can not carry my small notebook in my pocket while swimming. On the north side of the island we are swimming by a cliff face and the water is especially deep. But it is also so clear and enticing that I try to dive as deep as my ears will let me.

After lunch the Samba headed west to the tip of the Española, to Punta Suárez. This was a short 10 kilometer cruise down the coast. We landed at the Punta Suárez jetty, tripped over sea lions, trundled past iguanas, and tumbled into the world of boobies. At first we saw a few blue-footed boobies - with white feet! These were immature, and had yet to acquire the signature coloring. But then we walked into a colony of nazca boobies. nazca boobies look like gulls on steroids gone bad. Their beaks are half way to pelicans and their face and eyes always look as if they are feeling goofy, but don't really mind. The boobies "nest" right on the rocky shore, but with out nest. An occasional twig or bit of gravel might be used to keep the eggs from rolling away, but that is about it. I guess when it is always 85 degrees there is little need to sit on an egg to incubate it. All through the colony we saw eggs, and great fuzz balls - the new chicks.

One of the most interesting event was watching a booby return from fishing to relieve its partner at nesting. They first tapped beaks together, which sounded like knitting needles, and the slowly rolled the egg from on top of the feet of one booby to the other. Gently pushing it with their beaks.

Beyond the nazca booby colony was a boulder field which was keep damp by a blow-hole down wind of it. The is a lava tunnel in the south coast cliff face and when waves roll in there is a spot of water which raises up 20 meters in the air, and then the salt spray changing the vegetation and environment of that boulder field.

We sat on the top of the cliff for a log time watching the birds soar around us and below us. In addition to boobies there are red-billed tropicbirds, a gull with long wisp-like tail feathers. There are also shearwaters and storm petrels. But the bird that we are all searching for is the albatross. This is almost the only island in the world where the waved albatross breeds. By this time of year all the eggs have hatched and all the adults and most of the young have taken wing and headed to the Antarctica. But one lone youth remain. It stands there with a wing span of one and a half meters (adults have wing spans of 2.25 m or 7ft 4 inches), and it would shake out its wings, thinking about trying them, but then think better and fold them up again and put them away, for a few minutes. We waited with bated breath, much like waiting for a babies first step. But maybe not today.

On the way back to the boat we nearly trod upon a Racer Snake on our way through the chaparral.

Again we fall into the routine, lifejackets, panga to the Samba, dinner, a discussion of what we saw today and what we should expect to see tomorrow. They four hour crossing tonight to Floreana.

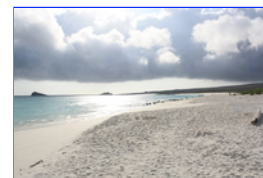
### Why the Animals Appear to be Tame

The thing which strikes you the moment you step on the shore of any of the islands of the Galápagos is that the animals are tame. Maybe that is the wrong word for it. They are wild animals, they do not approach you like pets or farm animals. But they are not shy of humans, they are not timid. They do not run away, but they also don't bare their teeth and snarl at you.

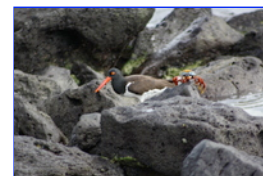
The second thing that struck me was that there are not a lot of different species. I am not a practiced birder, yet, within a day I could name every species we saw, except I couldn't distinguish the finchs. The third observation is that there are no land mammals. There are no squirrels or deer. There are no rodents, except those brought by



Jan 28 - Day 3



Gardner Bay & Beach



Oystercatcher & Crab



Sea Lion Pup



Sea Lions & Samba



A Pile of Sea Lions



Sally Lightfoot Crab



Sally Lightfoot Crab

humans. There are not even any native amphibians. These are the clues, the data from which we can start to understand the animal population.

The Galápagos archipelago is a thousand kilometers from the mainland of South America. It is also volcanic and only a few million years old. So all the species which live there had to cross the thousand kilometers of sea water. Birds can do it. Amphibians are not indigenous to the Galápagos because they are saltwater intolerant. Reptiles could survive a long voyage on a raft of vegetation which occasionally washes out of the rivers of South American and float out to the islands. But it must be a hardy reptile, or maybe eggs, to survive a thousand kilometers of drifting, with out fresh water.

When they arrived they found a place without predators. Babies and eggs are hunted by the hawks. But a mature booby has little to fear. Curiously, without predators, fear can be breed out of a population. It takes energy for an animal to run away or to aggressively defend itself. This is energy which could be spent on breeding. Fear becomes an unfit trait and doesn't survive.

When one talks about the "survival of the fittest", we must be cautious as to what we label as "fittest". Where there are no predators, fear or defense is unfit.

<b>Española</b> <b>Gardner Bay, Beach &amp; Island</b>	<b>Española</b> <b>Punta Suárez</b>
<i>Galápagos Hawk</i>	<i>Large Cactus Finch</i>
<i>Galápagos Sea Lion</i>	<i>Warbler Finch</i>
<i>Sally Lightfoot crab</i>	<i>Blue-footed Booby</i>
<i>Galápagos Green Turtle</i>	<i>Galápagos Mockingbird</i>
<i>Marine Iguana</i>	<i>Nazca Booby</i>
<i>Fish of all type</i>	<i>Red-billed Tropicbird</i>
<i>(no list when I snorkeled)</i>	<i>Magnificent Frigatebird</i>
<i>Sting Ray</i>	<i>Ruddy Turnstone</i>
<i>Star fish</i>	<i>American Oystercatcher</i>
	<i>Small Ground Finch</i>
	<i>Galápagos Dove</i>
	<i>Waved Albatross</i>
	<i>Brown Pelican</i>
	<i>Galápagos Hawk</i>
	<i>Lava Lizard</i>
	<i>Marine Iguana</i>
	<i>Racers Snake</i>



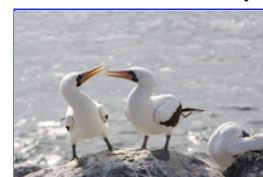
Tim and an Iguana



Marine Iguana



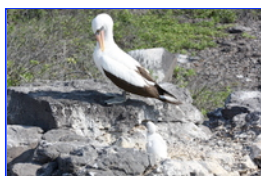
Immature Blue-footed Booby



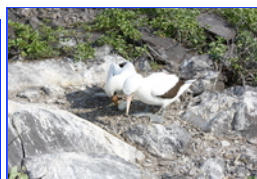
Nazca Boobies

Monoca & the  
Nazca Boobie Colony

Nazca Boobie &amp; Egg



Boobie &amp; Chick

Boobie Couple  
Exchanging the Egg

Lionel, Monaca &amp; Blowhole



Waved Albatross



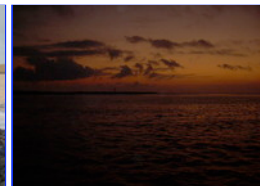
Tim on Clifftop



Father and Son



Del returning to the Samba



The Falling of the Night

**Friday, January 29, 2010**

*Floreana*

*Punta Cormoran*

*Devil's Crown*

*Post Office Bay*

I woke at 3:00 and found we were still. I think we have just dropped anchor.

We have fallen into a daily routine. Breakfast, first walk, back to the boat for a snack, snorkeling, lunch, a cruise up the coast, a second walk, dinner, review the day and prepare for tomorrow. Today will follow this pattern.

After breakfast we took the panga to the green beach next to Punta Cormoran. The point is the tuff cone of an old volcano, but there is a saddle between it and the rest of the island. In this saddle is a brackish lagoon, a haven to flamingos. But we didn't tarry here, yet, but scurried across the isthmus to a white sand beach. This is a place where sea turtles lay eggs and it was hoped that some of them may still be on shore.

The beach is called "Flour Sand Beach", because of the fine grains. There were turtle tracks crossing the beach, but no turtle. Based on the tide marks and extent of the tracks I estimated that the turtles returned to the sea at about 3:00 in the morning.

But the beach was still full of interest. There is a band of black rocks in the middle which gave us a chance to poke around and look for sea anemones, crabs, various mollusk and a lava heron who persisted to hunt despite our presents.

On the sands we watched ghost crabs. These crabs would scoop sand into their mouths and suck the nutrients out of it, and then spit out the reject sand pellets. There would also dive down their hole if we approached.

We then returned to the lagoon to watch the flamingos. I was reminded of the book by Stephen Jay Gould, "The Flamingo's Smile" in which he describes the adaptation by which flamingos head is upside-down when they eat, thus changing a down turned beak into a smile. When we first saw them I said to Dad, "Look, someone has left lawn ornaments in the lagoon!" It is a most curious looking bird, so tall, often standing on one leg, sleeping by curling its neck in a distinct pattern and shoving its head under its wing. They can contort their necks like a snake. Sometime there would be a whole row of them, one leg, necks folded the same way, facing the wind, and asleep. And so so pink.

We explored around the lagoon and eventually made our way back to the green beach. Here I lay on the sands outside a ghost crab hole, waiting for it to emerge. If you are persistent enough, and I was, it will come out and allow itself to be photographed.

Back to the boat for a snack. We maybe don't need it, but who are we to say "no"? And then away in the panga to "Corona del Diablo", or "Devil's Crown".

The Devil's crown is a ring of lava pillars in the sea, the remains of a volcano's cauldron.

I enjoy snorkeling, but I don't remember as well what it is that I see. I don't make list of fish. I say it is because I don't have pockets to carry my notebook and pencil, but also I don't have a classification system in my head. With birds I can say at a glance that it is gull-like or finch-like, but fish? I don't know where to start. I also think that I don't swim among fish in New Hampshire so the whole experience is very foreign. Still, I do enjoy exotic experience even if I don't completely understand.

The current through the Devil's crown is strong and without a concerted effort you could easily be swept away. If you want to watch something you need to swim against the current to maintain your position. If you don't care, let the current carry you to someplace new, to some novel curiosity of rock and fish. And if you want to see something close up, dive.

I enjoy diving, pushing myself down until my ears tell me this is deep enough. The wet suits we are wearing give a bit of extra buoyancy, so I really need to fight flotation to dive. When I put my head down, my flippers wave in the air for a few moments until my arms pull myself deeper into the sea.

Back on board the Samba, while we had lunch, the boat motored its way about five kilometers down the coast to Post Office Bay. There has been a barrel here for letters since at least the 1790's. Sailors, especially whaling ship on multi-year cruises, would post letters here, and then homeward bound ships would pick up the mail and carry it to either the east coast of America or the Europe. We sorted through the post cards which were in the box, each of us taking some addressed to place near our homes. I took one to New Hampshire and one to Vermont. I also posted a card to Will.

We also had some free time to kick around the beach. Thomas, Frauke, John and Lynda swam with green sea turtles. I walked on the rocks and then went to see our crew play against the crew of the N. G. Islander (a National Geographic boat). I fear that they beat us, but I think that everyone enjoyed it. I am told that every Friday they play the same match, these two ship cross paths every week in the same place. I also expect that there are a number of games all week long here. The field looks well used and I think a crew needs an escape from the routine of on-board life.

Back on the Samba the captain is blasting his horn repeatedly to try and retrieve the crew. I think Camilo (1st mate) was the football ringleader and Nixon (steward), the youngest member of the crew, played with a lot of skill and energy.

We weighed anchor and bid Floreana adieu. We have a long crossing tonight to Isabela and so were underway by 4:00. A few frigatebirds escorted us overhead, and some storm petrels played in our wake. It seemed like a rough passage, but we were only pitching by 10-12 degrees. Still, after a few hours that motion can be tiresome. I like watching a whole shelf of books lean to the right and then on the roll of the Samba pitch over to the left. They didn't flip over every wave, only on the



Jan 29 - Day 4



Monoca & Tim after landing



The Samba at Anchor



On Flour Sand Beach



Tracks of Ghost Crabs



Turtle Tracks



Lynda & John see a Penguin?



Shorebird



most extreme.

The ship at one point bore up to the south which confused me until I realized that they had set a jib, which helped steady the boat a bit. We then ran on to the west. At one point we also made a circle, I am told we were chasing dolphins.

The sun set in the west and the full moon rose in the east. At about 7:00 the boat slowed such that our rolling was less extreme and we had dinner. Dinner usually arrives on four platters and we pass them around the great table in the main cabin, eating "family style". One platter is the meat (tonight fish), a starch (spaghetti), vegetable and a salad. Tonight we also had a fruit bowl in a melon, and then Nixon sweeps everything away and we have desert with tea and coffee.

We recapped the day and then most of us wandered off to bed. I stayed in the main cabin and worked on my notes. Often Lynda is here downloading photographs from her camera to her iPod. Thomas loads his pictures to his laptop. Since they are traveling for a year, he also sorts and discards many of them at this time.

The boat is rolling, pitching and yawing so much tonight that it is a challenge to write.

### The Motor Yacht Samba

The Samba is a pretty ship. She is about 24 meters (78 feet) long and about 6 meters (20 feet) wide. Her hull is a deep blue and the rest of her is white or wood. All of the wood, except the deck is thickly varnished. I'm sitting in the Great Cabin, or the "Saloon", where we have our meals. There is a large table, benches and the eternal tea and coffee urn. Behind here is the aft deck. You can sit out here but I find it generally too noisy. It is just above the engine room and the diesel engine runs all the time. In front of the main cabin is the kitchen and beyond that the foredeck. We use the foredeck to as a place to set while we cruise and to change into our snorkeling gear. We use the aftdeck to get ready for trips ashore, even leaving our walking shoes here.

The lower deck contains our cabins. My bunk is comfortable, but space is limited and I have to slip my toes under my lifejacket if I want to stretch out while sleeping. I think the crews quarters must be very tight.

The upper deck includes the pilot's house or bridge, the captain's cabin and an unused cabin. It also includes a fore and aft deck for sitting on. I have become a fan of the upper aft deck.

The empty cabin reminds us that the Samba is designed for 14 passengers, but is only carrying eight on this trip, a sign of the depressed economy. I seems odd that we still have a crew of six and a naturalist, but I expect that they are doing all they can to keep the crew united and in tack.

We also have to "pangas", or zodiacs which hand from davits on the side of the Samba. These are in constant use ferrying us to shore, to snorkeling, or back to the mothership.

Floreana Punta Cormoran	
<i>Galápagos Penguin</i>	<i>Velvet-fingered Ozius Crab</i>
<i>Galápagos Shearwater</i>	<i>Sally Lightfoot Crab</i>
<i>Greater Flamingo</i>	<i>Sea Anonomies</i>
<i>Magnificent Frigatebird</i>	<i>Conch</i>
<i>Sanderlings</i>	<i>Galápagos Green Turtle</i>
<i>Black-necked Stilt</i>	<i>Ghost Crab</i>
<i>White-cheeked Pintail</i>	<i>Fiddler Crab</i>
<i>Lava Heron</i>	<i>Star Spider</i>
<i>Least Sandpiper</i>	
<i>Semi-palmated Plover</i>	
<i>Franklin's Gull</i>	



Tim Hunting in Tide Pools



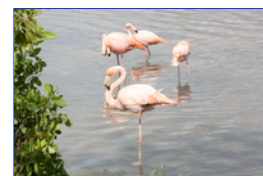
Lava Heron



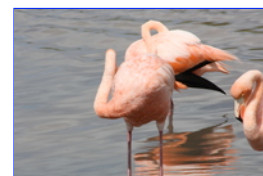
Sea Anonomies



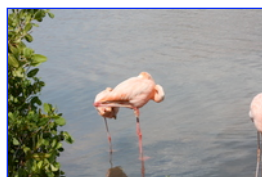
Flamingo Lagoon



Flamingos



Flamingos at Rest



Flamingo



Ghost Crab



Returning to the Samba



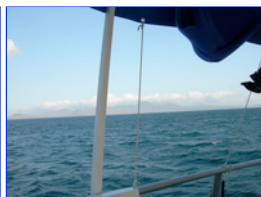
The Barrel at Post Office Bat



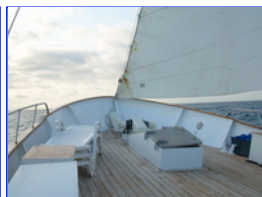
Soccer at Post Office Bay



Sea from Porthole



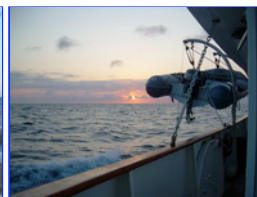
Farewell to Floreana



Sailing into the Evening



Our Group on the Foredeck



Sunset & Panga

**Saturday, January 30, 2010**

*Isabela*

*Punta Moreno*

*Elizabeth Bay*

We dropped anchor at about 2:00 in the morning.

We were up earlier than usual because it can be a hot walk across the black lava fields later in the day. We breakfasted at 6:30 and boarded the panga at 7:15. We are at Punta Moreno, Isabela, one of the western islands. The sea is empty of all other boats and tours as far as the eye can see. It is a bleak, bare and empty, but enchanting coast.

Coming in to the shore to land is a bit of a challenge. we are just past the full moon, and so this is the low spring tide. The panga gingerly made its way among the lava reef to land us.

Once on dry land we went to look at some pools. These are volcanic tunnels or "tubes" which have had their roof collapse. These pools, or basin are still connected to the ocean at high tide, sometimes via underground passages, but at low tide often sea creatures are trapped. The one we explored is much bigger than a regular tidal pool, 20m x 40m, and it is connected to other pools via underground passages. I sat above the tunnel, and occasional, a meter below me something large would emerge. Once a shark, and later a sea turtle, as well as a grand assortment of fish.

Lionel took a tumble here while clambering on the lava. Most of the lava offers great traction because it is sharp and abrasive. But some parts which are submerged at high tide can be slippery with algae. Lionel slipped at the transition point. Mónica was carrying a large first aid kit (as was I) in her bag, and then we found out that Thomas is a doctor who specialty is training emergency responder. Lionel was soon covered with iodine and bandages.

We continued inland.

As we leave the coast we also leave the mangroves behind. Before us the lava field is a vast black expanse. The flow is only about 200 years old. The lava is all "pahoe-hoe", which rope like. It always makes me think of the skin of milk when it burns, becoming wavy and then pushed into what looks like braids and ropes as it cools. It is both forbidding and yet fascinating. The large scale field is Mordor with acres and even square kilometers of what looks like tortured pavement. But up close it is art and more akin to the beauty of ice, although in reversed colors. There are pieces which are frozen waves and piece which have tiny needle shape icicles hanging from the bottom. Most pieces appear like sponges with a multitude of air pockets, and when you walk on it, the sound of basalt clicking on basalt reminds me of tiles.

And then we came upon a lagoon. In the midst of the lava field there are basins where lava tubes have collapsed and brackish water has collected. The long basins are a dozen meters wide and half a dozen meters below the level of the field, and almost invisible until you are within 50 meters of them. An oasis in the lava desert. Trees, grass, algae, ducks and most notably - flamingos!

We sat for a long time watching life in these lagoons. The flamingos feeding, the pintails and grebe. But eventually we continued across the lava field to the coast where the panga awaited us and fetched us back to the Samba.

After the snack most of us went snorkeling, but I choose to stay onboard and catch up on writing up these notes.

During lunch the Samba weighted anchor and headed up the coast to Bahia Elizabeth. The plan for the afternoon is to explore the mangroves in the panga. It has also started to rain. So we all donned our raingear, lifejackets, cameras and binoculars and loaded ourselves into the panga.

On a rock entering the bay we saw blue-footed boobies and flightless cormorants! As we approached the paused a watched a pair of great-blue herons, a parent and a chick - or perhaps an adolescent.

In the mangroves we saw turtles and sea lions, Australian herons, lava herons and so forth. But the most interesting thing was to watch the brown pelican and the galápagos penguin fishing. The pelican would swoop in on a school of fish at the same time that there as a ripple in the water, like the wake of a torpedo, where the penguin was swimming underwater. One one time there were three penguins and a pelican chasing fish around us. Occasionally the penguins would stop and stick only their head and neck above water. They reminded me of loons when they do that.

I gave up on trying to photograph the penguins and they dashed about, and switched my camera to video mode. On our way back to the Samba we were approaching a rock with a flightless cormorant on it and I started the video. As we rounded the rock there was a blue-footed boobies, sea lions and a pair of penguins!

This evening the captain joined us for dinner. It was a formal event for which we dressed our best. There was wine, and a toast to start us. After dinner Mónica recapped the day and Dad gave us a short lecture on the importance of the Galápagos in the development of Darwin's thinking. I think the mini-lecture went was well received.

And so I have now caught up with this journal and can go off to bed.

### Darin in the Galápagos

Evolution did not occur to Darwin fully developed when he visited the Galápagos. There was no great epiphany here, it took years. Darwin arrived in the Galápagos in September of 1935 and only spend a few weeks here. He was a young man of 26 at the time, and the book he wrote after visiting here, the "Voyage of the Beagle", did



Jan 30 - Day 5



Punta Moreno



Start of the Morning Walk



Tim watches a Pools in the Lava



Sea Turtle coming out of a Lava Tube



Thomas & Monoca, First Aide on Lionel



Del on the Lava





not talk about evolution. It was two dozen years later, in 1859, that he published the "Origins of Species".

I quote from Dad's evening lecture on what Darwin did see:

*"The first group that Darwin was aware of was the mockingbirds. When he first started to look at his collection he saw that the mockingbirds from different islands had different appearances, a different length of bill. Although as it turns out those are quite as diversified as the finches that was the first thing he was aware of. Also the giant tortoises, they vary from island to island, especially because of the kind of food that they are eating. If they have to reach up high to get at prickly pear then, shape of their shell is sort of saddle shaped, a high arched space in front which allows them to reach upward. Those which are on islands where they do more grazing at ground level have a more dome shaped shell. He first became aware of this when he talked to the governor of the islands. The governor said that "I can tell you what island a tortoise comes from by looking at the shape of its shell". This amazed Darwin. It probably didn't register with Darwin, because we know that the Beagle, just like all sailing ships at the time took on a number of these large tortoise for food, they ate them as they traveled across the Pacific and they threw the shells overboard. I am sure that if Darwin recognized the importance of this at the time he would have saved those, but it didn't. So it took him awhile to recognize what the story was."*

Delmont Smith - Jan 30

Darwin wrote in this "Voyage of the Beagle",

*"I have not as yet noticed by far the most remarkable feature in the natural history of this archipelago; it is, that the different islands to a considerable extent are inhabited by a different set of beings. My attention was first called to this fact by the Vice-Governor, Mr. Lawson, declaring that the tortoises differed from the different islands, and that he could with certainty tell from which island any one was brought. I did not for some time pay sufficient attention to this statement, and I had already partially mingled together the collections from two of the islands. I never dreamed that islands, about fifty or sixty miles apart, and most of them in sight of each other, formed of precisely the same rocks, placed under a quite similar climate, rising to a nearly equal height, would have been differently tenanted; but we shall soon see that this is the case. It is the fate of most voyagers, no sooner to discover what is most interesting in any locality, than they are hurried from it; but I ought, perhaps, to be thankful that I obtained sufficient materials to establish this most remarkable fact in the distribution of organic beings."*

Charles Darwin - Voyage of the Beagle

<b>Isabela Punta Moreno</b>	Semi-palmated Plover Greater Flamingo Moorhen Pied-billed Grebe White-checked Pintail	<b>Isabela Bahia Elizabeth/Elizabeth Bay</b>	Australian Heron Brown Pelican Galápagos Martin
Blue-winged Teal Black-necked Stilt Magnificent Frigatebird Blue-footed Booby Brown Pelican Galápagos Crake Least Sandpiper	Galápagos Green Turtle Shark Dragonfly	Magnificent Frigatebird Blue-footed Booby Flightless Cormorant Great Blue Heron Lava Heron Yellow Warbler Galápagos Penguin	Galápagos Sea Lion Galápagos Green Turtle

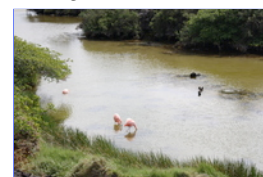
Crossing the Lava Fields



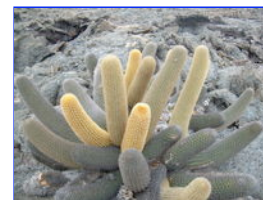
Close-up on the Bottom of a piece of Lava



Del Watching Flamingos in a Lagoon in the Lava



Flamingos in a Lagoon in the Lava



Candelabra Cactus



Panga Ready to Fetch Us



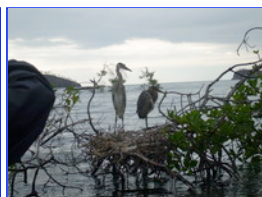
Cormorant & Booby



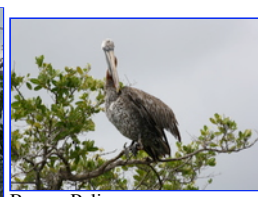
Flightless Cormorant



Blue-footed Booby



Great Blue Heron



Brown Pelican



Penguin



Flightless Cormorant



Blue-footed Boobies



Penguin



Booby



**Sunday, January 31, 2010**

Isabela - Urbina Bay

Fernandina - Pinta Espinozo

The Line 0 0" 0"

The engine started and the anchor came up at 5:00am after a quite night in Elizabeth Bay. It is about 30 km to Urbina Bay and we arrived there about breakfast time. After eating we went ashore in the panga. Sea turtles have been here overnight to lay their eggs in the sand; we see their tracks in the inter-tidal zone of the beach. Over the high tide line the beach is pitted with craters where they have dug and buried their eggs.

The turtles are gone, but the beach is alive with hermit which scurry about, hiding in their adopted shells. We let the beach, skirting past a poison apple tree (the sap will give you a rash), and walked about 40 meters inland until our path was blocked by a giant tortoise (G. vandenburgi). We were entranced with it for about 20 minutes. I'll use Dad's words here,

*"It was ambling along, moving very slowly, coming towards us. So we moved to a little open area, taking pictures all the time. Our guide suggested that we sit down so we don't intimidate it, although I am not sure it would have been intimidated if we had been jumping up and down. We sat down in a sort of a semi-circle with a little open space so it could walk through. And it walked and it came directly towards me, I was at the end of one of the segments. So I thought, 'well, he wants to come this way, so I'll move over to the other side', so I moved and he changed his direction and came right to me. And came right up to me and looked me in the eye. Stood there for some time, kind of breathing, looking at me, looking around, and then finally, as if to say 'well that's enough of that', turned and walked on. But it was an amazing experience to be within a couple of feet of this giant tortoise, huge animal, very old. I have no idea how old this one would have been but probably older than me. And moving so slowly, and there he was."*

The whole encounter between my father and the tortoise seemed to be in slow motion. Think of the way Ents might encounter each other. The tortoise then continued down to the beach. We continued up the trail, avoid position apple trees, iguanas and tortoises can eat their fruit. We meet a second tortoise, and then I thought I saw a humming bird. Dad agreed that it looked like a humming bird, but he also knew that there were none in the Galápagos! It was a hawk moth, a huge moth with a straw-like mouth which allowed it to drink nectar from flowers, humming-bird like.

A large yellow land iguana blocked our way for a bit. And then we saw them everywhere in the underbrush and in open patches. They are up to a meter long and the ground is riddled with their burrows. After a two hour walk we circled back to the beach and snorkeled for forty minutes. We swam over a diamond ray. Ray or Skates are curious looking fish, but in general not aggressive and a bit shy. I also found myself hovering above a school of fish all in a band a meter below me and half a meter from the sea floor.

Back on the Samba we had lunch while crossing Canal Bolivar ("canal"="channel"). Lava gulls and frigatebird accompanied us on our 30 km crossing to Isla Fernandina while we had lunch.

Our landing at Punta Espinozo was a but tricky with waves bumping the panga up again the jetty, and the jetty covered with dozing young sea lions. Also, apparently the entire peninsula has shifted do to volcanic activity, and the jetty is cut off from the rest of the point at high tide. I had brought sandals, and so waded down the trail where our path run through a low spot in the mangroves.

The marine iguanas here are as thick as any photograph I have ever seen of them. Iguanas piled on top of each other, bodies and tails all mixed together, small ones walking on top of larger ones. We watched an iguana try to dig a burrow to lay eggs in. But in this case the effort appeared futile, as she dug deeper and deeper the burrow continued to collapse on her. The sand here was too loose. Near by we saw many more successful burrows. The most impress aspect of Punta Espinosa is undoubtedly the density of marine iguanas, but there is other wildlife too.

We walked around the point, avoiding the sand where eggs might be buried. The black-belly plover is a new species to us. There is also a nice collection of flightless cormorants. Near the end of the walk a skeleton of a whale is laid out on the sand. It washed up near here a few years ago and the guides have moved it here, well above the storm surges. When headed back to the landing, the tide is higher and the water is well over my knees. We meet another tour off a different boat who seemed to be dumbfounded by the water. I don't know if they ever solved the problem of how to cross.

Back aboard the Samba we weighed anchor and headed north. Twenty-five kilometers north of Punta Espinosa is Volcano Ecuador, where the equator lies. But on route we were waylaid by whales, the Bryde's Whale, which is also called the Tropical Whale. These whales are 12-14 meters long. There were at least half a dozen of them, but there could have been one to two dozen in the pod, then keep disappearing beneath the wave, and reappearing a hundred meters of more away. They would blow, their backs would slide across the surface, and then just before they plunged I could see their dorsal fin. I was surprised how far aft on their back it was.

Volcano Ecuador is an amazing cauldron, especially since 100,000 years ago half of it was blown away into the sea by an enormous eruption. So now, when you travel up the cost, you are seeing a cross section of the cauldron, and in fact you sail through where the west side of the cauldron was.

We then crossed "The Line". It is just that point where the GPS counts down to zero. We were all invited up to the pilot's house, the bridge, to watch the count down, and then the steward appeared with a tray of drinks to celebrate the moment. And so we successfully returned to the northern hemisphere, at least for a few hours.

We then had dinner, and afterwards we all sat in the Grand Saloon talking. I sat between Lynda and Beth and they told me



Jan 31 - Day 6



Giant Tortoise



Giant Tortoise



Del & Giant Tortoise



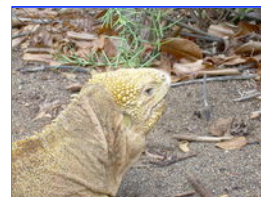
Face of a Giant Tortoise



Del & Giant Tortoise



Isabela Land Iguana



Land Iguana

about Girl Guides and life in small Oxfordshire villages. But now the party has broken up and we are rounding the north end of Isabela and heading to Isla Santiago.

### Darwin on Isabela and Fernandina

I have often heard people say that Darwin said the islands were ugly, and then people quote him;

*"Nothing could be less inviting than the first appearance. A broken field of black basaltic lava, thrown into the most rugged waves, and crossed by great fissures, is every where covered by stunted, sun-burnt brushwood, which shows little signs of life. The dry and parched surface, being heated by the noonday sun, gave to the air a close and sultry feeling, like that from a stove: we fancied even that the bushes smelt unpleasantly."*

He really was more interested in the plants and animals than the geology. Still, he described a walk on Isabela. Isabela was called Albemarle in the English maps at that time. Narborough is what is now called Fernandina.

*"September 29th."* We doubled the south-west extremity of Albemarle Island, and the next day were nearly becalmed between it and Narborough Island. Both are covered with immense deluges of black naked lava, which have flowed either over the rims of the great caldrons, like pitch over the rim of a pot in which it has been boiled, or have burst forth from smaller orifices on the flanks; in their descent they have spread over miles of the sea-coast. On both of these islands, eruptions are known to have taken place; and in Albemarle, we saw a small jet of smoke curling from the summit of one of the great craters. In the evening we anchored in Bank's Cove, in Albemarle Island. The next morning I went out walking. To the south of the broken tuff-crater, in which the Beagle was anchored, there was another beautifully symmetrical one of an elliptic form; its longer axis was a little less than a mile, and its depth about 500 feet. At its bottom there was a shallow lake, in the middle of which a tiny crater formed an islet. The day was overpoweringly hot, and the lake looked clear and blue: I hurried down the cindery slope, and choked with dust eagerly tasted the water—but, to my sorrow, I found it salt as brine.

The rocks on the coast abounded with great black lizards, between three and four feet long; and on the hills, an ugly yellowish-brown species was equally common. We saw many of this latter kind, some clumsily running out of our way, and others shuffling into their burrows. I shall presently describe in more detail the habits of both these reptiles. The whole of this northern part of Albemarle Island is miserably sterile."

Isabela - Urbina Bay	Canal Bolivar/ Bolivar Channel	Fernandina - Punta Espinosa	At Sea
Hermit Crab Giant Tortoise ( <i>G. vandenburgi</i> ) Smooth-billed Ani Galápagos Mockingbird Large Ground Fitch Medium Ground Fitch Small Ground Fitch Hawk Moth Yellow Warbler Land Iguana Galápagos Flycatcher Diamond Ray	Lava Gull Flightless Cormorant Magnificent Frigatebird	Marine Iguana Galápagos Sea Lion Flightless Cormorant Brown Pelican Galápagos Penguin Ruddy Turnstone American Oystercatcher Whimbrel Galápagos Hawk Sally Lightfoot Crab Hermit Crab Lava Lizard Black-bellied Plover	Bryde's Whale (Tropical Whale) Manta Ray Sunfish Flying Fish Galápagos Fur Seal



Snorleling At Urbina Bay



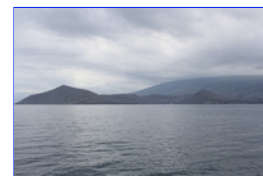
Lava Gull



Waiting for Lunch



Typical Lunch



Bolivar Channel



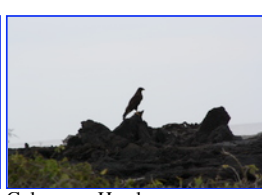
Tim & Thomas Photographing  
An Iguana Digging a Burrow



On Punta Espinosa



Iguanas on Punta Espinosa



Galapagos Hawk



Flightless Cormorant



Swimming Marine Iguana



Sea Lion & Iguana



Whale Bones



Upper Foredeck  
Approaching the Equator



GPS at 0 0 0



Celebrating Crossing The Line



**Monday, February 1, 2010**

*Isla Santiago  
Puerto Egas  
Isla Bartolomé  
Pinnacle Rock*

At about 10:00 in the evening we re-crossed the line and returned to the southern hemisphere. At about 1:30 we arrived at our anchorage.

We have an early morning today, breakfast at 6:30 and it is pouring outside. Around the breakfast table we all eyed each other with a bit of uncertainty. Lydia voiced the opinion that it looked like an all day rain to her. I do not know what the local weather patterns are like, but I do know that the Galápagos are generally very dry. So I still have hope for a good day.

By 7:15, when we are boarding the panga, the weather has abated. When I awoke I was aware of the lights of other boats in the harbor, and now I see that they are four or five ships, the most we have seen since Puerto Ayora. We are back in the central islands.

On shore we walk the rocky coastline. It is so grey and wet that I am reminded of Maine. But it is much warmer and the rocks are lava, with the rope-like pahoehoe and tubes. We have seen most (all?) of this birds before. Do I remember the excitement of first seeing the Magnificent Frigatebird? The unworldliness of the marine iguana? Maybe this is just a sign that our trip is winding down - this is our last full day. What six days ago was strange and exotic is now familiar and comfortable.

But there is one new creature here, the Galápagos Fur Seal. It is actually a type of sea lion, but who is keeping track? What draws it to Punta Egas are the Grottos, the caves where the lava tubes reach the ocean. Waves roll up these passages into the coast and provide a cool refuge for the fur seal, a daytime refuge from the heat, for at night they sn well offshore.

The grottos themselves are curious pieces of geology, or landscape architecture. For most of these tubes the roof has collapsed and there is a deep channel into the coastline. But in a few places the roof of the tube is in tact and we are left with a bridge 2 meters wide and 5 meters long over a chasm 10 meters deep filled with rolling waves off the ocean, and fur seals.

After returning to the Samba a group of us go snorkeling, but I opt out and instead read and rest. There will be a second chance to snorkel this afternoon.

We sailed around the north shore of Isla Santiago as we lunched. Much of the time we would lose sight of the coastline because of the mist. Sometimes I could just barely pick out the white surf. But slowly the day cleared and dried up.

I was out on the fore-deck when I saw a fin on the port bow. When we were about a hundreds meters from it, it seemed to become aware of us, and came racing to meet the Samba. I had visions of a torpedo, the way the fin sliced the water. I approached and seemed as if it must crash into our bow, but then with a last second twist of the tail and flick of a fin, the dolphin slipped under our bow and raced along side us. And then a second and third dolphin join the fun. At one point we had at least seven dolphins escorting our bow and more playing in the wake.

I leaned over the bow and watched them gimbal and dance. Sometimes coming within half a meter of the hull, but never touching it. Sometimes leaping clear of the water as they played. It really must be play. I can think of no other explanation of all that bounding and display of energy and gymnastics.

When we would lose them the captain would make a big circle with the Samba and again collect them on our bow. On and on, kilometer after kilometer, they danced and dove, jump and cavorted! Eventually we lost our escort and continued on to Isla Bartolomé with its most dramatic "Pinnacle Rock".

We dropped anchor in a bay on the north side of Isla Bartolomé, With Pinnacle Rock marking the west end of the bay, and then suited up and went snorkeling. Almost immediately after slipping over the side of the panga and shark, two meters long, swam right underneath me, maybe three meters away. One has always been taught to fear these animals, but they didn't really seem that interested in us. A number of wild animals, such as the rays we've seen, have potential to cause harm, but in general don't. We worked our way around the base of pinnacle rock. There were schools of yellow tailed trigger fish. On the sea floor there were Blue Starfish and chocolate chip star fish. On the rocks above the wave there were sally lightfoots, of course, and sea lions. And then, as we rounded the rock, penguins!

We swam with penguins! If Dad's close encounter of a Galápagos native was a Giant Tortoise on Isabela, mine was with a Galápagos Penguin at Isla Bartolomé. They swam about us and didn't seem to care about our presents. They didn't come up to us on purpose, but also didn't avoid us. If they saw a fish behind me, they swam right past, at one point passing within a quarter of a meter.

The galápagos penguin reminds me of loons. There are biggish black and white swimming birds. In fact the penguin is smaller than the loon, and sits much lower in the water, like a cormorant in this respect. It swims not like a fish, more like a torpedo. I have now seen them swim underwater and then swim quickly and with purpose as they fish. Streaks of black and white.

We returned to the Samba, changed and went ashore to climb to the summit of Bartolomé. The island is bare and volcanic. You can see spatter cones and shutts where lava flowed down the sides of the volcano at one time. I think the lava must have been moving too fast to form a "tub" with a roof. This is not a place to look for birds or any animals, and only a very few, most hardy of plants eke out an existences on the dry island.



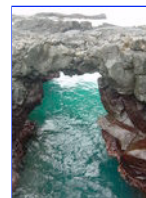
Feb 1 - Day 7



Morning Walk in Light Rain



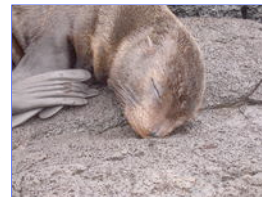
They are NOT Periwinkles



Waves in the Grotto



Tim with Notebook &amp; Iguana



Sleeping Fur Seal Pup



Monoca, Chino &amp; Panga





This is a place to look at geology. I have always thought of volcanos as being particularly solid geology, heat treated forged rock. But that is not right. The volcanos are fragile. The tuff blows away, the pumice is more air than rock, and the spatter cones have the strength of a dribble tower you make with wet sand on the beach. The lava is porous, soft and brittle. Because of this the park service has build a wooden walkway for most of our climb to the peak.

As we approached the peak, Mónaca asked us if any of us had brought a flag to plant on the summit. I happen to always carry in the bottom of my day pack my troop's bandana, so Dad and I flew the green and white from the top of Bartolomé. This is the same flag which flew over Kebnekaise, on our arctic hike in Sweden in 2007.

The view is breathtaking. Both the expanse of the ocean, the distant islands and the ruggedness of the spatter cones close at hand. On the way back down we meet two other tour groups. I am so happy that I have spent this last week with a small group of gentle, curious people.

Back on the Samba, at 7:00 as the end of the cruise cocktails with the whole crew and then a turkey dinner. After dinner we talked for a long time about what was the best way to tip the crew and the naturalist. Dad and I also had fun trying to explain why tomorrow is Ground Hog's Day to the English and German in our group.

Talking and laughing. It is hard to imagine that tomorrow night we will be in Quito and the night night in Florida, when today I saw dolphins play and I swam with sharks and penguins.

### Face-to-Face With Animals

I come back to this time and time again. What you see on these islands is not evolution, but animals who have no fear of humans. They also don't show signs of fear towards each other. I am reminded of the image of the sea lion and the iguana who were sleeping back-to-back on Punta Espinosa, and the baby fur seal asleep on the rocks at Puerto Egas. It seems a little unworldly. The lion lying down with the lamb, the animals of Doctor Dolittle, or wandering through Narina or a Disney movie. But it is real. And it make sense in a land with limited predators. To run away is to waste energy.

There are predators. Penguins do get eaten when they are in the ocean by orcas and other creatures, but here at Bartolomé they feel safe, which left me with my closes face-to-face encounter. I nearly collided with a penguin. I could have reached out and touched it.

Puerto Egas		Enroute	Isla Bartolomé
<i>Smooth-billed Ani</i> <i>Magnificent Frigatebird</i> <i>Brown Pelican</i> <i>Galápagos Mockingbird</i> <i>American Oystercatcher</i> <i>Galápagos Dove</i>	Galápagos Sea Lion Marine Iguana Sally Lightfoot Crab Galápagos Fur Seal	<i>Bottlenose Dolphin</i>	Shark Yellow-tailed Triggerfish (many, many more fish) Blue Starfish Chocolate Starfish Galápagos Sea Lions Galápagos Penguin

Our Cabin



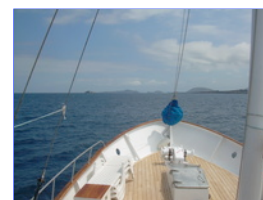
Ready For The Next Expedition



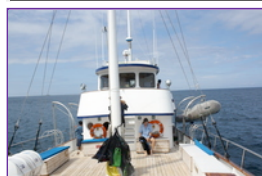
Storm Petrel



Dolphins Swimming Under Our Bow



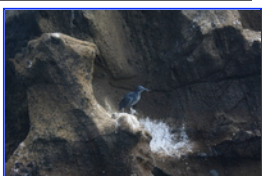
The Samba Headed Towards Bartolome



Getting Ready To Snorkel



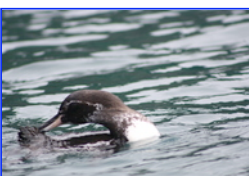
Snorkel Crew on the Panga



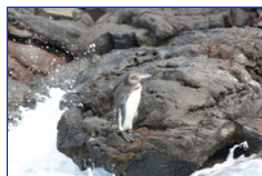
Lava Heron on Pinnacle Rock



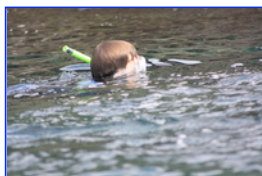
Sea Lion on Pinnacle Rock



Penguin Swimming



Penguin



Tim Snorkeling with Penguins



Penguins & Pelicans



Pinnacle Rock



Lava Chute & Flow



Lave Field & Path on Bartolome



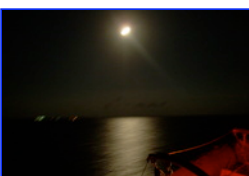
Troop Flag on Bartolome



Isthmus of Bartolome



Path from Peak of Bartolome



Moomlight on Last Night

**Tuesday, February 2, 2010***Ground Hog's Day**Santa Cruz**Black Turtle Cove**Baltra**Quito*

The plan calls for sunrise on a panga. So I set my alarm for 5:45, but woke at 5:40 in anticipation. By 6:00 we were climbing aboard the panga and on our way into Black Turtle Bay, on the north shore of Santa Cruz. This is our last excursion on this trip.

At the mouth of the cove is a rocky headland, the rest of the cove is lined with mangroves. On the rocks were blue-footed boobies, brown noddies and since it is a rock, there were also sally lightfoots. Overhead there were frigatebirds.

We eventually continued into the cove to watch the pelicans fishing. They would fly along, skimming over the water, and with a sudden twist of the body, plunge into the cove. After re-surfacing, they would swim along with their bill pointed down to left the water drain out. But here is the most curious thing. The brown noddies would alight on the pelican's head or shoulders and try to get any fish which might slip past the pelican's sieve. Every third or fourth pelican was followed by a noddie.

The sun is coming up now and the place is alive with activity. The cove is 400 meters by 200 meters and there are eight to ten pelican dives every minute. The franklin gulls also try to get in on the action and a few of them try to steal fish from the pelicans. One of the difference between the way the noddies and the gulls work is that the gulls can swim, whereas the noddies are adverse to the water and need to land on the pelicans.

We paddled into a backwater where I spotted a spotted eagle ray swim under the panga, as well as a number of green sea turtle. The Spanish called the sea turtle "black", and thus the name of the cove.

We eventually drifted back into the main cove and headed home to the Samba. It has been less than an hour since sunrise, but the cove is now quite and the pelicans have finished their fishing.

From the moment we return from the cove the mood of the group has changed. It is all about packing, saying farewell and moving on. One last breakfast from Chino and Nixon, omelets and much more. Then it is time for me to retrieve my swimming short from the drying line on deck and finishing packing. I visited the captain in the pilot house and told "fantastico!", and give him the crew's tip, Dad give our tip to Mónaca.

And then we were back at Baltra.

When getting out of the panga to go ashore we had to step over sea lions. I reminded the group that when we stepped over this group of sea lions a week ago it had been quite a thrill, but now it seemed most ordinary.

The rest of the trip?

I should briefly say a few things, although it really ends with pelicans and noddies back on Black Turtle Cove. A bus to the airport on Baltra. And, even though we are still in the Galápagos we are surrounded by our own species, a colony or flock of humans. Then a flight back to Quito where we said farewell to the rest of our group, and Sophia and Carlo took us again to Patio Andaluz in the old town.

That afternoon Dad and I walked around the old town, past Plaza Grande, Santa Domingo, Calle de La Ronda, San Francisco and back to the hotel. Dinner at Hasta la Vuelta Señor, tea, talk and bed.

The next day, a flight like any other back home.

<b>Santa Cruz</b>	
<b>Black Turtle Cove</b>	
<i>Blue-footed Booby</i>	<i>Sally Lightfoot Crabs</i>
<i>Brown Noddy</i>	<i>Spotted Eagle Ray</i>
<i>Brown Pelican</i>	<i>Shark</i>
<i>Franklin's Gull</i>	<i>Galápagos Green Turtle</i>
<i>Great Blue Heron</i>	
<i>Storm Petrel</i>	
<i>Magnificent Frigatebird</i>	

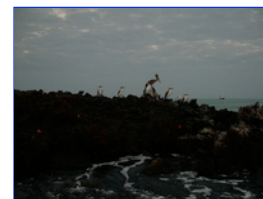
**In Conclusion**

Dad ended his on-board lecture about Darwin by reading the ending of the "Origin of Species",

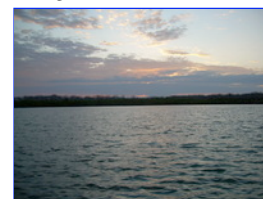
*"It is interesting to contemplate an entangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting*



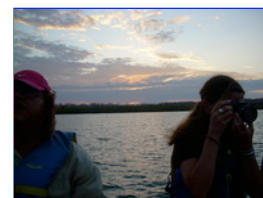
Feb 2 - Day 8



Twilight at Black Turtle Cove



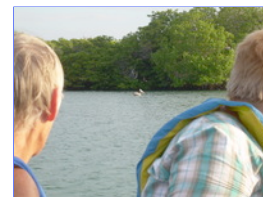
Sunrise



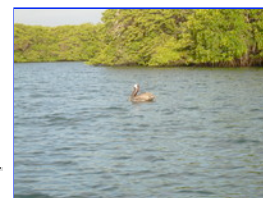
Sunrise in a Punta



Morning at Black Turtle Cove



Beth &amp; Lionel Watching a Pelican



Brown Pelican Fishing

*around us. These laws, taken in the largest sense, being Growth with Reproduction; Inheritance which is almost implied by reproduction; Variability from the indirect and direct action of the external conditions of life, and from use and disuse; a Ratio of Increase so high as to lead to a Struggle for Life, and as a consequence to Natural Selection, entailing Divergence of Character and the Extinction of less-improved forms. Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved."*

At one time when this trip was being planned we had talked about going to the Amazon and the rain-forest instead of to the Galápagos. In the Amazon a birder will add a thousand species to their life list. But that was not the point of this trip, or so it became clear to me. This trip was a pilgrimage for my father.

My father is an orderly person. He keeps list of everything. The birds he has seen, the books he has read. But the world of nature in the middle ages was not an orderly place. If you look at the "Bestiary", the books about animals in the middle ages they had a hard time organizing all the species. This is of course where Carolus Linnaeus comes in. In his book "Systema Naturae", published in 1735, a century before Darwin's visit to these island, Linnaeus set naturalist on a path to organize the world. Darwin was a disciple of his, collecting his way around South America and across the Pacific.

*"Deus creavit, Linnaeus disposuit", ("God created, Linnaeus organized")*

As Linnaeus wrote;

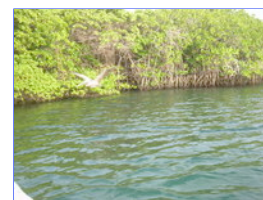
*"The first step of science is to know one thing from another. This knowledge consists in their specific distinctions; but in order that it may be fixed and permanent distinct names must be recorded and remembered."*

But as he said, it is the "first step". The Second step is to find a reason that a particular organization works - and that was the genius of Darwin.

My father once told me that biologist furiously defended the "The Theory of Evolution" because it is the only theory they have.

I would add, that it is the only theory they need. There are 1.6 million species of plants and animals cataloged on earth. The catalog looks like Linnaeus, but to understand why each one of these species exist, you need only Darwin's "Descent with Modification", or evolution.

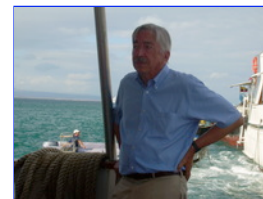
This trip was a pilgrimage, because only with evolution do millions of species, including iguanas who eat seaweed and finches who act like woodpeckers make sense. And make sense of the world is important to my father.



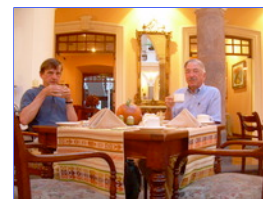
Pelican on the Wing



Returning to the Samba



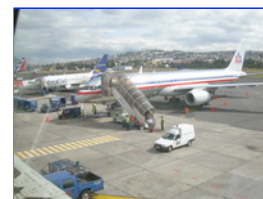
Del on Aftdeck Just Before Leaving



Breakfast in Quito



Patio Andaluz



Flight North & Home