

# ANTARCTICA

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January 1999

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This is a diary of our trip to the continent of Antarctica in January 1999. Antarctica is literally at the end of the earth, a continent the size of North America and Mexico combined. Although no human lives there permanently, and is composed of only rocks, ice, and snow, it teems with life. It is certainly worth a visit. Indeed, we now understand why humans have been fascinated by the continent since its discovery.

To get to Antarctica as conveniently as possible, one takes a ship from Argentina. The tour we selected—operated by Abercrombie and Kent—uses the ship Explorer, which sails from the port of Ushuaia, Argentina. To get there, the tour company has us fly to Santiago, Chile, and they transport us by chartered jet to Ushuaia.



Expedition ship Explorer. Taken in Duse Bay, Antarctica, January 1999.

We flew to Santiago, Chile on Friday, January 1, 1999. After about an 8-hour flight, we landed there about 8 on Saturday morning. We went by taxi to the Crowne Plaza Hotel, which is located on the Alameda, a main thoroughfare of the city, and within walking distance from the center of the city. (The street is also called Avenida Bernardo O'Higgins, a name reflecting the European influence. O'Higgins was a hero of Chilean independence from Spain.)

Santiago is a very old city, founded in 1541. Now it and the contiguous communities are home to over 4 million people, making it one of the largest cities in South America. It reminds us somewhat of Lisbon in its mixture of the old and the very modern. And in the matter of air pollution. Santiago is in a valley between the coastal hills and the Andes Mountains, and so pollution from cars and factories is trapped in the valley.

The city was not heavily populated when we arrived; it was New Year's weekend, and many residents were away at the beach or in the mountains. A highlight of our first day was a walking the old part of the city to see the Central Market where one can buy all manner of fruits, vegetables, and sea food. It also has a number of small sea food restaurants, which are reputed to be excellent. Late in the afternoon we visited the Museo Chileno de Arte Precolombino on Av. Bandera. This is an excellent exhibition of precolumbian art from all of the Americas and is not to be missed. (Be aware, though, that it is necessary to be relatively fluent in Spanish as the explanatory materials are only in that language.)

### SUNDAY, January 3

Sunday, January 3, was the day most of the tour participants were to meet at the Hyatt Hotel in Santiago, so we transferred there in the morning. It is a very beautiful hotel with excellent rooms, facilities, and restaurants. It is, however, far from the center of the city, and a taxi would be necessary to accomplish much sightseeing. In the afternoon we went on a very pleasant bus tour of the city with others from the tour group. Learned more of the history of the city, saw some of the fine old mansions, and then went to the Cerro San Cristobal, a very high hill that overlooks the city and is topped by a statue of the Virgin Mary, something seen in many Latin cities.

### MONDAY, January 4

Monday, January 4 was the real beginning of our adventure to the Antarctica. Abercrombie and Kent, the tour company, handles everything very well and this was no exception. At 8 AM we were taken to the airport and boarded a chartered Lan Chile 737 for the flight to Ushuaia, Argentina where we were to board the ship. The flight takes about 3 hours and is spectacular. Flying down the backbone of Chile one sees the Andes Mountains on the left and the Pacific Ocean on the right. The snow-capped mountains rise to 5000-6000 meters, and some are active volcanoes. The sky was clear as far south as the city of Puerto Montt and the Island of Chiloé (a place for a visit the next time).

We landed in Ushuaia, Argentina, our jumping-off point for the trip, at about 2 PM. It is in Tierra del Fuego and is the southernmost city in South America; it is where the Pan-American highway comes to an end. It is south of the Straits of Magellan and is located on the Beagle Channel. (The channel is named for the ship on which Darwin sailed around the world. It was commanded by Fitzroy, whose name was also given to an island we visited in Antarctica.)

Because the ship was not ready to be boarded—she had come in that morning from another trip and the crew were cleaning it and getting ready for our group—the tour company arranged a bus tour that went into the mountains north of Ushuaia. It is wild country, almost unpopulated, and full of spectacular, snow-capped mountains just aching to be climbed. The Argentine government is trying to encourage tourism and so is building ski resorts there. The town of Ushuaia itself is growing rapidly, partly because of the increase in tourism to the Antarctic and partly because the Argentinian government wants to have a significant presence in Tierra del Fuego. Nonetheless, it is an isolated, rather desolate looking place that clearly experiences severe winter storms.

We boarded the ship about 5 PM and landed in cabin 311. Although in the bottom-most level of cabins, we were not displeased because it was also midship. This meant that pitching and rolling would be at a minimum here. After crew introductions and an excellent dinner, we set sail at 8:20 PM. Headed east along the Beagle Channel. Our position was 54°-49' south and 68°-18' west. Air temperature was 5 °C and the wind was SW at 10 knots. I spent part of the trip up on the top deck but finally went to bed about midnight.

### TUESDAY, January 5

This was our first full day at sea and reflected life on the ship. After breakfast there was a video from the BBC about life in Antarctica and at 11 AM Louise Blight, the expert on seabirds on the staff (from University of British Columbia), gave a lecture on that subject. (One problem with the lectures was that they were given in the lecture theater on the ship. The theater was of course darkened. Combined with the motion of the ship, the fact that most lectures were after meals,

and the room was often quite warm, meant that not every one heard all of the lecture! Nonetheless, they were excellent and very informative.

After lunch Henry Pollack, from the Geology Department at the University of Michigan, talked on plate tectonics, and then there was another video, this one of seals.

For dinner that evening we were invited to sit at the Captain's Table (Captain Uli Demel from Germany). It was an excellent meal and we had delightful dinner companions. We sat with the ship's engineer, Jurgen Legart, with Charlie and Judy Goetz (he is a law professor at Virginia), and with Peter and Mavis Gray from England. Also met John and Moira Vass from Scotland and David and Maureen Keane from Ireland. (I asked Jurgen where his favorites parts of the world were, and he promptly answered Charleston, SC!)

During dinner we asked Jurgen if he would give us a tour of the ship's engine rooms, which he did the next morning. Found out the ship's fresh water comes from evaporation of seawater and the rest from reverse osmosis. Also found out the ship has only a single screw or propeller in the stern. A double screw ship cannot be used in the ice because the propellers would extend beyond the hull and would be damaged. The ship also has a propeller in the bow that can be used to direct a stream of water to the left or right to help steer the ship in tight quarters.

As an interesting aside, we found out later the caption had altered course slightly to the east so that the ship's pitching and rolling would be a bit less during the "captain's dinner."

Also experienced for the first time the ship's "open bridge" policy. Passengers are welcome on the bridge at any time and can look over the ship's charts and navigation equipment—GPS, radar, sonar, and so on. The Captain, first officer, navigator, helmsmen are all very friendly and patiently answer questions.

At some point during the day or evening we crossed the "Antarctic Convergence." This is the zone in which the dense, cold water from the Antarctic moving north dives beneath the warmer water in the north. The guidebook says it is "one of the major physical and biological zones of the ocean world." One can tell when the zone is crossed because the water temperature drops from almost abruptly to about 1-2 °C. Whales and seabirds feed in this zone because it is so enriched in nutrients.

Also saw the wandering albatross, a magnificent bird with a wing span that can run up to 10 feet or more. Learned that they have a very long lifespan, and can fly several thousand kilometers on a single feeding trip.

### WEDNESDAY, January 6

Still sailing the Drake Passage. Today's lectures were "The Dynamics of the Southern Ocean" (Charlie Wheatley), "Antarctic Penguins" (Louise Blight), and "The History of the Antarctic" (Jack Child, an historian at American University, specializing in South America).

Saw whales for the first time—three fin whales! The Captain maneuvered the boat to follow them as much as possible. (He was clearly keenly interested in whales, and every time we saw them, he maneuvered the boat to follow them.)

About 5 PM we sighted land, *Greenwich Island* in the *South Shetland Islands*. Everyone excited as it was our first landfall in Antarctica. We were cleared to land there as the Chilean government operates a naval station there as a way of claiming sovereignty over part of

January 5, Drake Passage
Position at noon: 57°-3' S and 64°-42'W
Overcast skies, seas 8-10 ft
Air temp 7 °C
Wind: WNW at 16-20 knt
105 NM S of Cape Horn

January 6, Drake Passage
Position at noon: 61°-33' S and 59°-53'W
Overcast skies, seas 6-8 ft
Air temp 3 °C
Wind: WNW at 16-20 knt
45 nautical miles N of S. Shetland Islands

Antarctica. (The station is named after Arturo Prat, a hero of the Chilean navy.) This was our first trip in the zodiacs, the inflatable boats were used to travel ashore, and it was the first we all dressed in our bright red parkas and knee-high rubber boots.

The Station consisted of a number of wooden huts of fairly crude construction. It was manned by about 10 men, some there only for the summer. Several will winter-over. Perhaps the main purpose of the Station is to maintain Chile's claim to that portion of the continent. There was, though, a young man there doing some biological studies, if only to maintain the fiction that it is a research station. Nonetheless, all were cordial and after a bottle of scotch was delivered, they stamped our passports with the stamp of their base.

One thing we learned about bases was that all have a refuge hut in case of fire. One of the most dreaded things at bases is fire. If the main huts were to burn down in the middle of the winter, the residents have to have a place to go, so every base has a small hut that can be used in an emergency.

Saw our first penguins on the beach along with a very docile Weddell seal. Of course everyone photographed them thoroughly, not knowing that there would be over a million penguins—and many more seals—yet to come.

Some of the Chilean officers came out to the ship for dinner, and then more came for drinks in the bar afterward. A gala evening.



Going ashore in a zodiac. Everyone in bright red parkas, wind pants, high rubber boots, and life preservers.

January 6, Greenwich Island  
 Arturo Prat base  
 Position: 62°-29' S and 59°-41'W  
 Overcast skies  
 Air temp 3 °C, water temp 1°C  
 Wind: WNW at 16-20 knt  
 Anchored in Discovery Bay

**THURSDAY, January 7**

During the night we sailed across the *Bransfield Strait* and arrived at *Gourdin Island* at 8 AM. This was our first real trip to a penguin rookery. At least several hundred thousand penguins there. Quite a sight and quit a smell. We noticed the smell as soon as they opened the door to the gangway to go ashore.

Visiting a penguin colony was really quite an experience. Here there was a mix of adelic and gentoo penguins with a few chinstraps around. The adelic penguins had bred before the gentoos as most breeding pairs had two, relatively mature chicks. The gentoo penguins were further back from the beach and their chicks had just been born or had not yet hatched. (We saw some unhatched eggs, but it may be too late for these. Even if they do hatch they may not mature sufficiently before winter sets in.)

The penguins build their nests from small stones gathered around the colony, so penguin rookeries are found only where the geology is right to provide the stones they need. We saw some juvenile penguins exhibiting mating behavior by gathering stones to make a nest. Presumably they will come back the next year to produce some young.

January 7, Gourdin Island  
 Position: 63°-35' S and 55°-46'W  
 Partly cloudy skies  
 Air temp 3 °C, water temp -1°C  
 Wind: NW at 15 knt  
 Anchored off east side of island

Some nests are very far from the beach, perhaps several hundred yards up a steep embankment or snow-covered hill. Nonetheless, the penguins make their way to the sea to feed and then carry food back to their young. (The parents regurgitate partially digested food when the chicks put their beaks into a parent's mouth.)

The naturalists explained that most penguins return to the same spot year after year to have their young. Also observed that many nesting sites were very high on a hill. We learned that this is because these are the first sites that are snowless in the spring, so these are the first available nesting sites. Thus, these sites are occupied by the first arrivals in the rookery and are presumably the spot in which the most successful breeding is done because the chicks in those sites will be most developed when winter comes again.

When leaving the beach at *Gourdin* in the zodiac to return to the ship, our zodiac was followed by two leopard seals. (They apparently like zodiacs and will often follow them, occasionally however taking a nip on a pontoon.) Leopard seals can often be found around penguin colonies because penguins are part of their diet.

Late morning and lunch time found us sailing through the *Antarctic Sound* into the *Erebus and Terror Gulf*. The sound was named for the ship sailed by one of the explorers of the continent, the Swede Nordenskjöld; it is between *Joinville Island* and the tip of the Antarctic Peninsula. Saw enormous tabular icebergs there for the first time.

*Erebus and Terror Gulf* was named for the ships sailed by another explorer, James Clark Ross, a Scot. (Between 1818 and 1836 Ross spent eight winters and 15 summers in the Arctic. Between 1839 and 1841 Ross sailed several times to the Antarctic in *Erebus* and *Terror*, the same ships used later in the Arctic by the doomed explorer John Franklin.) The gulf is part of the *Weddell Sea*, named for the Scot James Weddell. (Most of the seals we saw on beaches were Weddell seals.) I had the impression that it is a bit unusual to get into the Weddell because it can be filled with pack ice, even late in the season.

Once in the Gulf we went to tiny *Paulet Island* and anchored there at 4 PM. Went ashore to visit still more penguins. This time it was virtually all adelic penguins. Walked along the beach to the stone hut built by Nordenskjöld when he and his men were marooned there in the winter of 1903. His ship, the *Antarctic*, was caught in the pack ice and crushed.



Adelic penguins on Gourdin Island. Each is about two feet tall.



A large tabular iceberg. They arise from the ice shelf in the Antarctic spring.

January 7, Paulet Island  
 Position: 63°-35' S and 55°-46'W  
 Overcast skies  
 Air temp 3 °C, water temp -1 °C  
 Wind: NW at 15 knt  
 Anchored off east side of island

The men sledged for 40 km over the ice to reach the island where they built the hut and lived on penguin flesh until rescued in late 1903. (One man died while there and is buried on the island. His grave is the home of some pairs of penguins.)

While walking on the beach Rebecca Rothney was attacked by skuas, large, brown, gull-like birds. Skuas live in or near penguin colonies because they feed on penguin eggs or chicks that have been abandoned or are sick or dying. Indeed, we saw skuas eating penguin chicks.

Paulet also attracted a large number of Weddell seals at the end of the afternoon. They are very large—perhaps 6-10 feet long—and have mottled brown fur.

**FRIDAY, January 8**

Overnight the ship moved further into the *Weddell Sea*. We knew we were moving through ice because we woke up about 2 AM to the sound of ice banging into the side of the ship. The ship’s steward came into the cabin about 2:30 AM and closed our porthole so that ice would not break through the window.

At 8 AM we anchored off *Devil Island* and went ashore soon after breakfast. The island is clearly volcanic, with two very high hills on either side of the landing area. Hiked to the top to take some pictures and had a good time chatting with others while sitting there. Hiked back down, and weather cleared considerably.

The ship proceeded to move closer to the continent itself, aiming to land at *View Point* where there was a Chilean refuge hut. The weather cleared so that there was hardly a cloud in the sky. Everyone went on deck at the bow and watched as the Captain moved through small ice bergs, tabular bergs, and one-year pack ice to get to our destination. At times I was sure we would not make it but they kept moving. Sometimes the captain used the ship’s bow thrusters to push bergs out of the way. (The ship can turn almost on its axis using its single propeller and bow thruster.) It was an incredibly beautiful afternoon. Ice bergs are amazing things—the part under water is sky-blue. The color reminds me of the color of the mineral celestite, strontium carbonate.



Iceberg on the way to View Point. Berg is about half the size of the Explorer, at least above the water. (About 85% of the volume of a berg is below the water.)

January 8, Devil Island  
 Position: 63°-48' S and 57°-18'W  
 Partly cloudy skies  
 Air temp 1 °C, water temp -1°C  
 Wind: ;light breeze  
 Vessel drifted off north side of island

When we reached our destination most went ashore, our first time to actually set foot on the continent of Antarctica! (Katie stayed on the ship and slept on deck in the brilliant sunshine.) The refuge hut had been used in recent winters but it is an indicator of what people have done to the continent. It was surrounded by junk—old food cans, gasoline cans, parts of generators, old Primus stoves, bits of cloth, and so on. Nonetheless, it was a beautiful place. The geology was especially interesting. The rocks were largely black (with some streaks of quartzite) and had been metamorphosed over the millenia. Henry Pollack told me that this was bedrock on the continent. I noticed it had also been glaciated, the scars of glaciers moving over the rock were clearly to be seen.

January 8, View Point, Trinity Peninsula  
 Position: 63°-32' S and 57°-42'W  
 Partly cloudy skies  
 Air temp 5 °C, water temp -1°C  
 Wind: ;light breeze  
 Vessel drifted in the bay.

After going back on board, the ship worked its way out of the ice field. It was slow-going, but the experience was marvelous as we searched for open leads in the ice and pushed smaller bergs out of the way.

We were invited to have dinner this evening with Rebecca and Scott Rothney, who were to be married on this trip. Joining us were Louise Blight (the bird expert from Canada), Richard Polatty (biologist from the U.S. and Ecuador and a person involved heavily with Galapagos tours), Fiona (the store keeper; from Scotland). Told jokes for a long time after dinner, the best coming from Fiona.



Refuge hut at View Point on the Antarctic Peninsula. Note the very black rocks.

## SATURDAY, January 9

Up at 3 AM to see the sunrise. Very windy and cold and not a spectacular sunrise. Nonetheless, it lit up the sky and colored the hills and glaciers of the Peninsula and the ice bergs a soft pink. Large tabular ice bergs all around. Stayed on the bridge until 4 AM to watch us sail among the ice bergs.

Up again about 8 AM as the Captain said a humpback was cruising in front of us. Got good photos of the whale as it sounded.

Supposed to go to *Hannah Point* on *Livingston Island* in the morning but expedition leader Brad Rees decided not to as we were behind schedule a bit owing to tricky sailing through the ice. Everyone was disappointed because it is a good place to see elephant seals. Also, many species of birds nest there. Therefore, as we made our way to *Deception Island* Henry Pollack lectured on the Antarctic ozone hole and Jack Child discussed the very complex politics of the continent.

Arrived at *Deception Island* at about 1 PM. The island is actually a volcano—not quite extinct. It last erupted in 1969 when it badly damaged a British base and partly buried the old whaling station. The old caldera of the volcano is a natural harbor and so was long used as a whaling station. In the early 1900s whaling companies used *Port Foster*, as it was called, as a mooring site for floating factory ships. Therefore, we saw on the beach



Inside the caldera of Deception Island.

“water boats.” Apparently the whalers filled these small, decked-over boats with water and towed them out to the factory ships where the water was used to make steam for distillation of whale oil.

To get into the caldera the sail must sail through an opening called *Neptune’s Bellows*. (The natural opening is quite narrow—perhaps 500 m—but it is tricky sailing because an enormous rock reaches almost to the water’s surface in the middle of the channel.) The wind moving out through the channel was very fierce.

We first anchored at *Pendulum Cove* because here vents of hot gases warm the water enough so that one can go swimming—and a number of our fellow passengers did so! Also saw a number of chinstrap penguins on the beach. One fellow was very curious and approached us very closely and stood for some minutes watching us.

The name of *Pendulum Cove* comes from the fact that the British sent a team there to make gravity measurements using a pendulum. The beach and surrounding hills are pure black volcanic sand and rock.

Traveled just 5 miles to *Whaler’s Bay*, the site of an old whaling station, where the ship anchored and we again went ashore. The beach is again black volcanic sand, with glaciers on the hills in back of the beach. (The snow is covered with black dust, so it is difficult to see that they are glaciers.) We walked down the beach, looking at the water boats partly buried in the black sand. Walked to a breach in the caldera wall called *Neptune’s Window*. This provides a sweeping view of the *Bransfield Strait* and the almost vertical out walls of the caldera.

After dinner and an evening of conversation with Rebecca, Scott, and Melissa Gilhart, I went to the bridge to see what was happening. On the horizon one could see a band of bright blue sky. As the evening progressed it became brighter and finally the skies cleared into a brilliant sunset. The bright red skies lasted for hours—until I finally left the bridge for bed about 1:30 AM. This was almost the highlight of the trip. We sailed down the *Gerlache Strait* on a calm sea, past *Brabant Island* and past enormous ice bergs, into the sunset. The helmsman had some soft music on, and the only people on the bridge were myself, the helmsman, the navigator (Vince Ferrer; he always had the midnight to 4 AM watch), and Louise Blight. About 1:30 AM the Bremen, another Antarctic cruise ship, past us going the other direction.

## SUNDAY, January 10

The Captain woke us about 6:45 AM to let us know that two humpback whales were cruising in front of us.



Swimming in the water heated by hot vents in the volcano; Deception Island, Pendulum Cove.

January 9, Deception Island, Pendulum Cove.

Position: 62°-56' S and 60°-37' W

Cloudy skies

Air temp 2 °C, water temp 0 °C

Wind: WSW, 15

January 9, Deception Island, Whaler’s Bay

Position: 62°-59' S and 60°-34' W

Cloudy skies, light rain

Air temp 2 °C, water temp 0 °C

Wind: W, 15

The first stop of the day was a *Cuerverville Island*, discovered by the explorer Gerlache during his voyage of 1897-1899. A relatively small colony (only about 10,000) of gentoo penguins. It was a very pleasant stopover as the scenery was quite spectacular with high mountains rising on surrounding islands, and many large bergs in the bay. Saw several Weddell seals on pack ice or small bergs and cruised around the bay in zodiacs taking photos.

January 10, Cuerverville Island, Gerlache Strait  
 Position: 64°-41' S and 62°-37'W  
 Cloudy skies  
 Air temp 4 °C, water temp 0 °C  
 Wind: WSW, 15

The ship then moved on toward the *Lemaire Strait*. While still in the *Gerlache Channel* we encountered two pods of humpback whales (2 or 3 in each) that gave us the best “show” of the trip. The ship again maneuvered to get close to them, and we could even see the whales defecate masses of reddish waste, the color coming from their diet of krill (shrimp-like marine organisms). The most spectacular sight of all, however, was to see them breach—leap out of the water, rolling over as they did, and land on their backs. They did so a number of times, something Charlie Wheatley (one of the naturalists) said was most unusual. (The “show” was so spectacular that it interrupted the church services the ship’s steward was holding.)



A 40-ton whale breaching. In the Gerlache Channel on the way to the LeMaire Strait.

We moved into the *Lemaire Strait* about 4 PM. It is sometimes called “Kodak gap” because the scenery is so spectacular, with cliffs rising hundreds of feet above the water. While passing through we encountered a very interesting seal. A leopard seal was resting on a small piece of pack ice and seemed to be surrounded by blood. One of the naturalists noticed that a piece of its flipper seemed to be missing, which could account for the blood. Then we saw on the other side of the channel a pod of orcas (killer whales). Because they are known to feed on seals, this could have been the origin of the seal’s problem.

Emerging from the Lemaire, we came to *Petermann Island*. This was discovered in 1873-74 by a German expedition and named for a noted German geographer. It was the winter home to an expedition led by the Frenchman Charcot in 1908-1909, and there is a monument to this expedition on top of the hill. There is also a small refuge station here (Chilean or Argentinian?). We landed in Circumcision Harbor. The harbor was named for Circumcision Day (January 1?), but one of passengers suggested it was so-named because men living there were “cut-off” from civilization.

Onshore is a large colony of gentoo penguins and some blue-eyed shags (a type of cormorant). Climbed to the top of the hill where the views to the north and west were spectacular. The bay on the other side of the island was filled with large, grounded ice bergs.

We left *Petermann Island* about 7:30 PM and headed back into the *Lemaire Strait*. Because the weather was cool and windy, and the seas a bit choppy, the Captain put the ship into

January 10, Petermann Island, Gerlache Strait  
 Position: 65°-11' S and 64°-09'W  
**This is as far south as we went on the trip.**  
 Cloudy skies  
 Air temp 3 °C, water temp 0 °C  
 Wind: NW, 5-10

a side channel and “locked” it into the ice so the ship was stable for the barbeque dinner on the “pool deck.” It was a marvelous affair with excellent food and a terrible rock band made up of some of the crew.

**MONDAY, January 11**

This was Rebecca and Scott’s wedding day! Our first stop in the morning was at *Port Lockroy* on *Wiencke Island*. This is now a British base operated primarily as a tourist stop by the British Antarctic Survey. Like the other stations we saw it consisted of a series of crude wooden huts with the usual, outlying refuge hut. The British had turned some of the huts into a very nice little museum. They sold posters, T-shirts, and other small souvenirs and allowed us to mail postcards stamped with an Antarctic address.

Outside were the usual penguins (gentoo) with many chicks. On the beach the British had reassembled some whale skeletons left over from the time the station was a whaling station.

Anchored in a small bay near the station was a 50-foot, steel-hulled sloop sailed by 3 Norwegians. Apparently they were sailing Antarctic waters.

After lunch the ship anchored at the *Almirante Brown Station* (on *Whaleboat Point*) in *Paradise Harbor*. The Station, which is located on the Antarctic continent and not on an island, was destroyed by fire in 1984 by an Argentine physician who did not want to return home. It has since been rebuilt as a research/sovereignty station by the Argentine government. Unlike the other stations we visited, it looked to be in excellent repair. Also unlike the other places we visited there were just a few solitary penguins and the place was covered in several feet of snow.

One reason for visiting the station was the wedding of Scott and Rebecca Rothney. All of the passengers went ashore and stood near the refuge hut. Scott came ashore in a zodiac with some of the ship’s officers. Next Rebecca came. Fiona had



A barbeque dinner on ship while “locked” in the ice. Near 65° S. Just off the LeMaire Strait.

January 11, Port Lockroy, Wiencke Island  
 Position: 64°-49' S and 63°-29'W  
 Cloudy skies, drizzle  
 Air temp 4 °C, water temp 0 °C  
 Wind: light winds, 5



Caption Uli Demel with Scott and Rebecca Rothney, after the marriage ceremony.

helped her fix her hair, and she came carrying a bouquet of plastic flowers from the dining room. They brought her seated in a chair in her own zodiac. As she came ashore the ABs (able-bodied seamen, the fellows who handled the zodiacs and so on) stood in two rows along the path and raised their oars. As it was raining the wedding party—the captain, steward, the bride and groom, and a singer—stood under umbrellas. The captain read the wedding service, and this was followed by a very nice song from one of the crew.

After the wedding service, our next objective was to climb the hill in back of the station, not to see the view—it was very cloudy—but to slide back down. The hill was covered in many feet of snow, but the snow was highly compressed and icy as indicated by its blue color. Many people made it to the top, sat on their butts, and slid down. I did it—twice—from part of the way to the top. A wonderful experience.

After everyone had finished sliding we did a zodiac trip around the harbor, largely to inspect the huge glacier at the head of the bay and to see the cliffs around the bay that were home to nesting shags and petrels. Then back to the ship after what was our last landing in Antarctica.

A hot shower and then back on deck as the ship was sailing through spectacular scenery and there was hope of seeing more whales. Finally, though, it was time to go to the lounge where we had champagne toasts for Rebecca and Scott and then to dinner where we were again guests at the captain’s table, this time at the invitation of the newly-weds.

During dinner, we later learned, the bridge watch spotted innumerable whales, perhaps 20 or more, playing around the ship. Indeed, we passed a Brazilian research ship that had a zodiac in the water that had been watching the whales much of the afternoon. The captain, however, had given orders that dinner was not to be disturbed by whale sightings!

During the night we passed out of the *Gerlache Strait* into the *Drake Passage*, heading back to Argentina.

**TUESDAY, January 12**

This was first full day on the two in the *Drake Passage*. The winds picked up and the seas grew steeper as we headed north. Passengers felt less well—including Katie—as the day progressed. I spent about an hour on the bridge, having a wonderful conversation with the captain.

During the remainder of the day there were more lectures, one by Jack Child on Shackleton, another by Trip Dennis on seabird flight dynamics, and yet another by Henry Pollack on “Earth’s Changing Climate: What’s Causing It?.” Otherwise, I spent the day on deck on the bridge.

January 11, Paradise Harbor  
 Position: 65°-53' S and 62°-53'W  
 Cloudy skies, light rain  
 Air temp 3 °C, water temp 0 °C  
 Wind: light wind, 5  
 Ship drifted in the bay and captain practiced moving ice bergs.  
 On the way to Paradise Harbor we encountered a number of whales but could not get close.

January 12, in the Drake Passage  
 Position at noon: 61°-31' S and 63°-09'W  
 Overcast, fog  
 Air temp 3 °C, water temp 1 °C  
 Wind: NW, 20-25  
 Waves: 8-10 ft

**WEDNESDAY, January 13**

Still sailing in the *Drake Passage*. (Note that the water temperature increased considerably overnight, indicating we had crossed the convergence zone.) The wind increased and the seas became even steeper. More passengers green. I ate candied ginger much of the way to avoid joining their ranks.

More lectures during the day: Charlie Wheatley on whaling and Jack Child on Darwin and the voyage of the *Beagle*.

January 13, Drake Passage  
 Position at noon: 57°-11' S and 66°-01'W  
 Cloudy skies  
 Air temp 8 °C, water temp 6 °C  
 Wind: WNW, 35-40  
 Sea: Very rough with 13-30 ft waves

As the day went along I sat in the dining room as that part of the ship felt the least pitching and rolling motion. The winds increased to 40-50 knots (even saw some gusts go to about 75 knots), and the swells from the NW were steep. On the Beaufort scale we were in a 8-9 force gale. Seems appropriate for a passage to *Cape Horn*.

The captain had hoped to get close to the Cape, but the swells and winds did not allow it. Nonetheless, about 6:30 PM we spotted it, lying to the west in the low overcast!

Normally, the ship sails to the east to enter the *Beagle Channel* for the trip to Ushuaia. However, late in the afternoon, a passenger—an older lady from Italy—fell down the stairs from the lecture theater and apparently broke her leg. Therefore, the captain used this as an excuse to call the Chilean station on Cape Horn and request permission to use the more direct route up the *Richmond Channel*. (This required extensive negotiation, which was done by Richard Polatty as he is fluent in Spanish.) This meant the Captain's Farewell Dinner was held in much calmer waters and we had a calm sleep.

#### THURSDAY, January 14

Up early to have breakfast and disembark. Very sad to leave the "little red ship" as she is called and to leave some newly made friends in the crew and some of the folks heading back to Europe.

They again took us on a tour of the Ushuaia and a national park to the west of the city. Went by the southern-most golf course in the world.

Flight back to Santiago left about 1 PM and arrived there around 4 PM or so. Said goodbye to the others heading back to the U.S. Again sad to do so as we had met many interesting, nice people.

January 14, Ushuaia, Argentina  
 Position: 54°-49' S and 68°-18' W  
 Sunny  
 Distance traveled from Paradise Harbor,  
 722 nautical miles. Total distance traveled  
 was just short of 2000 nautical miles.

#### FRIDAY, January 15

Friday afternoon we had an appointment for lunch with Jorge Perez Etchegaray, a relative of Carl Meacham, a colleague at Oneonta. Senor Perez is a director of the Banco Central de Chile. We met him at his office at the bank (Augustinas 1180) about 2 PM. After a pleasant conversation he took us to a private dining room for lunch where we had our own waiter. We had a juice (could have had a pisco sour) and then sat down to delicious seafood appetizer. Then the main course was an excellent steak in a delicious Bernaise-type source. Finally, we had dessert of fresh fruit and then coffee. All the while we discussed the Chilean economy and its relation to the world. He made the point the economies of the world had become increasingly interlinked starting about 10 years ago. (It would be interesting to explore the relationship of this to the growth of the Internet.)

As we ate lunch he remarked that some people were laughing in the adjoining dining room. This, he said, was the director of the Bank of Chile, and they were feeling good that they had averted a crisis brought on by the crisis of the week before in Brazil.

We spent almost two hours chatting over lunch, and had a thoroughly enjoyable time.

After lunch we went to again to the museum for pre-columbian art. It is an excellent museum and worth a second look.

#### SATURDAY, January 16

We had hoped to visit some wineries this day but could not work out the arrangements. Therefore, we spent the day visiting the remaining museums in Santiago: Belles Arte (that was exhibiting the very erotic work of young Chileans), an archeology museum, much like the pre-

columbian museum, and then the house of the famous Chilean poet Pablo Neruda (who is known to us as the central figure in the movie *Il Postino*). The latter was quite interesting. It is located at the base of the high hill in Santiago. Outside the house is a space that appears to be a performance space. It is a tier of stone seats, with large stones at the top inscribed with what is apparently the poetry of Neruda. There are grooves between the tiers and between the seats, and water trickles through the grooves, which are then joined at the bottom of the space; the water finally spills into a cistern.

### SUNDAY, January 17

We had made arrangements the day before to hire a car and driver, Manual Luna (a recommendation from Rebecca and Scott). Although the weather was overcast, we nonetheless set out for the Andes Mountains near Santiago. Just beyond the city, we began to climb steeply. He told us there were 42 hairpin turns on a narrow road to reach the first “level” in the mountains. Then the road began to climb again, again through many hairpin turns. Eventually we were at about 3100 meters (about 9500 feet) in Valle Nevado where is a ski resort and four hotels. It is a spectacular place. The mountains still rise steeply from there. (The highest nearby is about 5100 m or about 15,500 feet.) They also fall away precipitously from the resort. Although I experienced some shortness of breath, I climbed up to the top of the one of the ski lifts for an even better view.

The geology was interesting: very shaley rock, heavily banded and folded, streaks of red and green (from iron and copper, respectively). Indeed the copper color was expected because Chile is rich in copper.

### MONDAY, January 18

We finally made it to a winery! We again hired Manual Luna for a trip to the Cousino Macul winery, which is located in a district of the city. The winery has been owned for some generations by the Cousino family. The word “Macul” is the area of the city and comes from the Mapuche word meaning “right hand.” (The Mapuche are an indigenous group in Chile.) The winery was like some we have seen in California, but we had a tour of the aging rooms with barrel after barrel of red wine. We purchased three bottles of 1996 cabernet, which we had had before and found to be excellent.

Later in the afternoon we went to the airport for our flight home about 10:30 in the evening. However, we timed our visit to see Carol Coryell, a friend from Oneonta who had brought a group to Chile to hike in the Torres del Paine district in the south of the country. Her Lan Chile flight to New York left just an hour before our American flight to Miami

### TUESDAY, January 19

Landed in Miami about 4:30 AM after a good flight from Santiago. Then on to Kiawah to relax—and work on our house. A wonderful trip!

### Final Impressions of Antarctica

- Much more complex politically than we thought and a rich history.
- Much more snow and ice and much less rock, and much more mountainous, than expected.
- Many more penguins than we ever thought possible. In general, much more “life” than expected—penguins, whales, birds, seals. The various bird species and whales have a much longer life span than we had known.
- One of the most intriguing, interesting, fascinating places we have ever been. Cannot wait to return!