

CARLTON M. CAVES  
(505) 350-8963

KAREN L. KAHN  
(505) 235-8619

JEREMY K. CAVES  
(505) 263-1241

ELEANOR M. CAVES  
(505) 239-5931

22 EAGLE NEST COURT NE  
ALBUQUERQUE, NEW MEXICO 87122-2025

kahncaves@info.phys.unm.edu  
(505) 856-6522

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## A New Mexico Diary

*Sunday, 2010 July 4:* Carl arrives at the Brisbane Airport from LA early in the morning, proceeds by train to Toowong, only to find his apartment at the Toowong Villas not yet available. He walks the two blocks to the Coffee Club, where he enjoys a breakfast of toast and eggs and takes advantage of the free wireless to Skype with Eleanor on Saipan and Karen in Albuquerque.

Just over three weeks into their extended trek along the Pacific Crest Trail (PCT), Jeremy, Erin Morrison, and Roque Sanchez celebrate Independence Day by conquering Muir Pass. Over the last week they have traversed the Sierra's still snowy high internal passes. The first, Forester Pass, was the toughest: after slogging across two miles of morainal flats covered in deep, post-holing snow, they ignored the trail and hacked their way directly up the 600-foot headwall to the pass, where they were able to glissade for half a mile down the steep north side. After Forester Pass came Glen Pass, Pinchot Pass, Mather Pass, and today the last, Muir Pass. The pass is broad and long, too gentle for glissading, so they are forced to slog across 7.5 miles of snow, the longest stretch of snow of the trek. Fortunately, they have perfected the ability to tread as lightly as possible to avoid post-holing thigh-deep in the deep snow.

*Friday, 2010 July 9:* Jeremy, Erin, and Roque detour to the Iva Bell Hot Springs, a series of hot pools strung along the head of Fish Valley. Small and hard to find, the pools are a welcome respite from weeks of cold water, and the party spends two hours luxuriating in the second-highest of the pools. Perched 500 feet above the valley floor, they soak in the warmth and the superb view of the distant Clark Range extending south from Yosemite Valley.

*Saturday, 2010 July 10:* Eleanor dives at the Blue Hole, a tunnel in a submerged limestone plateau on the west side of Guam. Entering the 25-by-35-foot opening at about 60 feet, she descends another 70 feet and exits through a window onto the side of the plateau. The water is crystal clear, and the limestone wall provides a ghostly backdrop for coral, colorful fish, and the biggest sea slugs she has ever seen. Ascending to about thirty feet above the plateau for a safety stop, Eleanor spots a shark, the first of her diving career. It's a five-foot-long black-tipped reef shark, which casually patrols the surface of the plateau below. She watches excitedly till it disappears from view.

After the dive and lunch, Eleanor heads to Barista Blends in Hagåtña, her favorite coffee shop. Tropical breezes rustle the palms around the verandah. The turquoise waters of Agana Bay lap a wide, white-sand beach. Eleanor works contentedly on her application for a Fulbright Fellowship.

*Saturday, 2010 July 17:* Eleanor is spending time on Tinian, the third island she has visited during her summer in the Marianas. Today she and Summer Jennings, her fellow NSF-sponsored intern in the Ecology of Bird Loss Project, tour Tinian's beaches. The reef around Tinian is right off shore, making it easy to snorkel among the coral and fish, but necessary to time snorkeling for high tide. They linger for several hours at a randomly selected beach, reveling in the silken white sand and the clear, blue water stretching to the horizon. They have all of it to themselves.

Jeremy returns from six weeks of backpacking on the PCT. Shortly after arriving in Albuquerque, he sits down at the kitchen table with Karen to Skype with Eleanor at an internet cafe on Tinian—she reports that Skype has made few inroads on Tinian—and Carl in Brisbane, both of whom, sharing the same time zone, but not the same side of the equator, find it to be Sunday morning. Everything is discussed, including Eleanor's new idea to apply for scholarships that would send her to Cambridge University for a year of graduate research beginning in September of 2011. Skype records that the conversation lasts one hour, 50 minutes, and 45 seconds, before yielding to incipient rain on Tinian and dinnertime in Albuquerque.

*Sunday, 2010 July 18:* Eleanor and Summer roam across Tinian, visiting sites left over from World War II. Tinian was a major wartime American air base: over 80% of the island's forests were cleared to make room for wartime infrastructure, and Tinian played a crucial role in the concluding actions of the war. On 1945 August 6, the *Enola Gay* took off from Tinian to drop the second atomic bomb, Little Boy, on Hiroshima; three days later, the *Bockscar* rose from the same airstrip to deliver the third bomb, Fat Man, to Nagasaki. A somber Eleanor and Summer drive down the runway, imagining taking off aboard one of those B-29s. They peer into the bomb pits where the new atomic weapons, about to change the world, but too bulky to fit beneath a B-29, were lowered before being winched into place, ready for delivery. From New Mexico, where the bombs were invented and assembled—and the first, the Gadget, was tested on July 16 at Trinity Site on the Jornada del Muerto, a hundred miles south of Albuquerque—to Tinian, where the two bombs were winched into the bellies of the waiting B-29s, to Japan, where they snuffed out the lives of tens of thousands—Eleanor leaves the airstrip sobered by her experience.

*Sunday, 2010 July 25:* Eleanor does her last dives on Saipan, with Summer, dive guide Harry Blalock, and his wife Kelly. They revisit Eleanor's favorite Saipan diving sites, the Grotto and Wing Beach. At Wing Beach they are accompanied by five spotted eagle rays, which swim gracefully alongside, like birds flying in slow motion, the creamy white of their undersides alternating with a topside of rich brown dotted with white.

*Wednesday, 2010 July 28:* Jeremy arrives at Ben-Gurion International Airport to begin a ten-day tour with Birthright Israel, after which he plans to spend another eleven days touring on his own.

On her regular early-morning walk along the base of the Sandias with neighbor Kate Fry, Karen strides to within a couple of steps of a rattlesnake that's stretched out in the middle of the trail. The snake coils and rears, angry, rattling, and ready to strike—and holds its ground. After recording the snake on camera from a safe distance, Karen and Kate detour well off the trail to avoid it. Karen has now come close to stepping on poisonous snakes on two continents. At the house after the walk, she sees a big bear print, plainly imprinted in the mud left from an overnight rain.

*Saturday, 2010 July 31:* Carl stares fixedly through his binoculars at a dozen, distant black-winged stilts. They stubbornly resist firm identification by turning away from a stiff breeze and burying their heads against their opposite side. Suddenly a huge Australian pelican glides into the field of view, landing just beyond the stilts like an A380 materializing behind a flock of 737s. The pelican paddles to shallow water, where it stands with its black-trimmed-with-white wings spread to catch the wind. Carl is birding at Oxley Creek Common, a nature preserve in the southwest Brisbane suburbs. He spots a tiny red-backed fairy wren flitting along a fence row, its jaunty black tail flicking back and forth, its brilliantly red back glinting in the late afternoon sunshine of this mid-winter day. The most memorable sighting is a spangled drongo, iridescent black, with a bright red eye and a weirdly up- and out-curved tail, forked at the tip. The drongo's twisting flights in pursuit of insects seem more acrobatic than is strictly necessary. Perhaps it's just showing off; regardless, its performance is appreciated. The drongo brings Carl's Australian list to 269.

*Sunday, 2010 August 1:* Eleanor and Summer are spending the weekend on Rota, taking in the smallest of the four major islands of the Marianas. They have snorkeled at the Grotto and viewed red-footed boobies and white-tailed tropicbirds at Rota's bird rookery. Today they visit a project aimed at saving the highly endangered fanihi, the Mariana fruit bat. There are three bats on site, all suffering from an injury that prevents release to the wild. Eleanor uses her head to get to know them. A male fanihi likes to grab a female with the hook-like claws on its wings, rubbing the female with its head and leaving a coating of oil. Eleanor, not a bat, but a female and maybe batty, makes the close acquaintance of one of the males by letting it nuzzle the back of her head for five minutes. She finds the bat's fur, a beautiful black and tan, to be soft and supple, fully justifying the moniker of flying fox.

On a day of sparkling clarity, the Sun pouring out of the northern sky, Carl peddles to the top of Mt. Coot-tha on his regular, ten-mile bike ride from Toowong. He pauses at the summit to take in the expansive view: the hills and mountains of the Great Dividing Range to the south and west; the wide Brisbane River winding sluggishly through the city, which sprawls across the coastal plain to the south and east; Moreton and North Stradbroke Islands on the eastern horizon, bounding the wide, blue waters of Moreton Bay. Though not as iconic as Sydney's Opera House and Harbour Bridge, the view is impressive nonetheless.

*Tuesday, 2010 August 3:* Jeremy and his Birthright Israel group raft the Jordan, an experience more like an amusement park than rafting in North America. The Jordan isn't much, even by New Mexico standards, being considerably narrower than the Rio Grande. The rafting company loads four people onto each raft and tilts a loaded raft into the river once every 30 seconds. Just wide enough for two rafts abreast, the river is a scene of chaos. As the rafts jostle for space on the crowded river, the goal is apparently to knock as many people off neighboring rafts as possible. Unlucky rafters left behind after unseating hitch rides on other rafts, hoping to overtake their own. After an

hour, Jeremy and his intrepid crew of three Birthrighters haul themselves out of the river, excited at having survived a uniquely Israeli outdoor adventure.

*Sunday, 2010 August 8:* Jeremy is staying at the home of Leorah Weinstein (née Edelstein), Karen's distant cousin, and her husband Ronnie in Herzlia, north of Tel Aviv. Leorah is an attorney, and Ronnie is CEO of Wissotzky Tea, Israel's biggest tea importer. Today Jeremy, Leorah, and Leorah's daughter Shachar tour the permanent exhibition at the Yitzhak Rabin Center in Tel Aviv. The exhibition is housed in an intertwining, downward-directed double spiral, the history of Israel on one spiral paralleling Rabin's personal history on the other. At the bottom is a memorial to the martyred Rabin and his vision of an Israel at peace with its Palestinian neighbors.

*Saturday, 2010 August 14:* Eleanor and Summer spent last weekend sorting the seeds they had collected in traps placed at carefully measured distances from the boundary of native forests on Guam and Saipan. They sorted and counted the seeds and, most importantly, determined which had been dispersed by birds. Yesterday afternoon they present their findings in a talk that was the first seminar of this academic year at the marine lab of the University of Guam. Their main finding, unmistakable from the data, is that birds carry seeds several tens of meters away from the native forest on Saipan, but that there is no dispersal of seeds by birds on Guam, an expected result given that the native birds were extirpated by the brown tree snake after its introduction following World War II. This afternoon they celebrate their successful project and presentation by doing boat dives at Gun Beach and Agana Bay.

*Sunday, 2010 August 15:* After a week in Singapore, Carl takes the red-eye to Sydney, arriving at 5:00 am. His hotel, The Lord Nelson Brewery Hotel, on The Rocks beneath the Harbour Bridge, is shut tight when he arrives at 7:00 am, but manages to awaken by 7:15 to accept his luggage. His favorite bakery, La Renaissance Café Patisserie, isn't yet open when he passes by at 7:45 am, hungry for a chocolate croissant and coffee. The neighboring bakery sells him a muffin and a flat white, but earns his eternal enmity by refusing his request to sit at one of their empty sidewalk tables, on the grounds that they don't open till 8:00. He retreats to a bench overlooking Sydney Harbor, where he makes quick work of the muffin and flat white, and then takes the long train/bus ride to Bondi Beach as the sky turns grey and gloomy.

The day is off to a dispiriting start, but as he steps onto Bondi Beach at 9:30 am to begin the coastal walk south from Bondi, things suddenly look better: the Sun bursts forth, the sweatshirt comes off, and it's a beautiful Sydney winter day, the temperature pushing 70. He passes successive embayed beaches separated by rocky points that rise well above the water. He is charmed by Clovelly Bay's recreation facilities on Shark Point: older Aussies play lawn bowls on an obsessively level field, their crisp whites and the green of the lawn contrasting with the deep blue of the Pacific, while younger Aussies practice football on a neighboring field. He has a lunch of eggs Florentine in Coogee, whose absolutely perfect beach has attracted sun-seekers, swimmers, and surfers. On the broad point south of Coogee, he passes through two small nature reserves and spots the glittering blue of male superb fairy wrens, popping in and out of trailside hedges. It's a signature day after all, just what the doctor ordered as a restorative before the long flight across the Pacific tomorrow.

*Monday, 2010 August 16:* Jeremy and Tahel Ben-Yehuda, eighteen years ago a fellow kindergartner in Albuquerque and now preparing to enter Tel Aviv University after two years of military service, drive from the Ben-Yehuda home in Karne-Yosef to the middle of the Negev Desert. They have come to view the Makhtesh Ramon, the Grand Canyon of Israel and the largest of several makhteshim, elliptical erosional craters that are unique to the Negev and the Sinai. Being summer, it's too hot for good hiking—104°F or 40°C in the merciless Sun, and there is no shade—but they enjoy expansive views of the stark, rugged terrain.

*Wednesday, 2010 August 18:* Jeremy arrives in New York City from Tel Aviv as dawn lights the city. In mid-afternoon he boards Amtrak's Lake Shore Limited, bound for Chicago, where he will transfer to the Texas Eagle, with the goal of arriving in Little Rock in the wee hours of Friday morning.

*Friday, 2010 August 20:* Eleanor returns to Albuquerque in mid-morning after a long series of flights from Guam via Honolulu and Houston.

*Saturday, 2010 August 28:* Jeremy, Eleanor, and Karen enjoy breakfast with Gwen Williams and Abby Hellwarth at *Bottega Louie*, which is located in the former Brooks Brothers store on the first floor of the palatial Brockman Building at 7th and Grand in downtown Los Angeles. Recommended by Gwen, the restaurant makes an impression, its high ceilings, white-gloved waiters, and opulent pastry bar reminiscent of the elegance of the Gilded Age. Jeremy, Karen, and Eleanor drove to Southern California last Thursday, Jeremy on his way to the International Conference on Paleöceanography, which begins at UCSD tomorrow, Eleanor returning to Pomona College for the fall semester, and Karen along for the ride.

*Sunday, 2010 September 5:* We're all in Stillwater, Minnesota, not far north and east of Minneapolis-St. Paul.

Karen and Carl flew in from Albuquerque Friday evening, with Jeremy and Eleanor arriving from Southern California an hour later. We spend today canoeing down the St. Croix River with Uncle Doug and cousins Jeff and Natalie. It's a glorious day: autumn asserts its growing primacy in early morning and then steps aside to let summer take a final bow as we paddle down the river. In the evening, we join the rest of the family and other guests to witness and celebrate the wedding of Alex Godar and Ryan Tallant, held in a lovely outdoor setting at the Camrose Hill Farm near Stillwater. The sky weeps a few tears of joy as the ceremony proceeds, just enough to bless the union without discomfiting the wedding party or the guests. At the wedding dinner, Karen and Eleanor file away for future reference the clever idea of having a different wedding cake at every table.

*Monday, 2010 September 13:* Jeremy arrived in Tucson yesterday. Today he starts a three-month stint as an intern at the United States Institute for Environmental Conflict Resolution, which is housed at the Udall Foundation.

*Thursday, 2010 October 7:* Jeremy has been assigned to work on the Bureau of Land Management's land-management plan for the La Cienegas National Conservation Area south of Tucson. Today he accompanies Amy Markstein, housemate and fellow Toolik intern from the summer of 2009, who works for the BLM, to LCNCA to check out the area's upland grassland community. On arrival, they find that the Arizona Game and Fish Department is releasing prairie dogs. Graduate students strait-jacket each dog, weigh it, cut a hair sample, and apply an ear tag before releasing it into its new digs. Two dogs at a time go into each pre-constructed burrow, which is stocked with a supply of food and water. All of a sudden a dog escapes, prompting a frantic ten-minute chase. The dog and the whole Game and Fish crew run hither and thither across the landscape in the style of the Roadrunner and Wily Coyote.

*Saturday, 2010 October 16:* This is the weekend to celebrate Carl's 60th birthday. A big group—Karen, Jeremy, Carl, Doug, Sherry, Jeff, Linda, Tom, and guide Jerry Goffe—arises before dawn to drive east of San Antonio, New Mexico, onto the grassy plains not far north of the Trinity site. Falconer Matt Mitchell brings along a peregrine falcon and a peregrine-gyr-falcon hybrid. When a pigeon is released, the peregrine sets off in pursuit, stooping dramatically and whistling past the assembled group, but ultimately failing to catch the elusive pigeon. When it's the per-gyr's turn, a prairie falcon wanders into the scene, and the two tangle over the right to dismantle the pigeon, thereby ensuring that neither succeeds in catching it. Yesterday the group toured the Bosque del Apache National Wildlife Refuge and topped off the day by getting up close to two of Matt's Harris's hawks. Arrayed in black, with rufous shoulders and a white tail split decisively by a broad black band, Harris's hawks are beautiful birds and, according to Matt, increasingly the choice for beginning falconers. As the Sun sank behind the hills west of San Antonio, the two hawks, a mother and her daughter, suddenly took off after their favorite prey, a jackrabbit, chasing it across the creosote-bush-studded plain. The rabbit escaped unscathed.

*Sunday, 2010 October 17:* Eleanor and seven friends camp in three tents on the valley floor at Kings Canyon National Park. Yesterday the group hiked along Hotel Creek Circle, and today they do the four-mile stroll to the head of Kings Canyon, where the Kings River tumbles down a series of cascades dubbed Mist Falls. As the group approaches the falls, they decide to reconnoiter them unencumbered by packs. Leaving these behind in a clearing, they look back to see a mother black bear and her cub emerge from the forest and make a beeline for the packs. Loud barking and hooting succeed in chasing the two bears away, saving the group's lunch. In camp this evening, the group gathers under a tarp just big enough to shelter everyone from an early-season rainstorm and digs into an ample car-camping dinner provided by the Claremont College food services.

*Monday, 2010 October 18:* After breakfast, Doug, Sherry, and Carl walk the short distance to Jaral Cabin Springs at the base of the Sandias. The spring, next to a ruined cabin, feeds a small basin that birds can't resist. Doug snaps pictures of the regulars, spotted towhees, scrub jays, robins, doves, and dark-eyed juncoes. Just as the group is leaving, a Townsend's solitaire materializes in the top of the juniper next to the cabin, and a juniper titmouse hops up to the basin. Both of these are lifers for Doug and Sherry. The solitaire is a surprise for everyone, Carl included, since he's never seen one in Albuquerque.

*Sunday, 2010 October 24:* Carl actually turns 60 while Jeremy, Amy Markstein, and Gabe McGowan, Toolik roommates during the summer of 2009, hike the eleven-mile loop trail through the spectacular hoodoos at Chiricahua National Monument.

*Sunday, 2010 November 7:* Carl is on an eight-day swing through California, giving talks at Cal Poly San Luis Obispo and Caltech and spending the weekend visiting Eleanor at Pomona College. Today, he, Eleanor, and her boyfriend, Nick Kramer, drive to The Huntington in San Marino, just south of Caltech. They spot an Allen's hummingbird systematically gathering nectar in the gardens, not a sighting to sneeze at. The Huntington, known for an extravagantly varied desert garden, a Japanese garden, an eclectic collection of 19th Century art, a Gutenberg

Bible and an Ellesmere manuscript of Chaucer's *Canterbury Tales*, an original edition of Audubon's *Birds of America* (Eleanor reports that they almost never turn the page so people can see a different bird), and an enormous collection of original science manuscripts, also provides a cozy refuge in its English-style Tea Room, where Carl, Eleanor, and Nick enjoy a dainty lunch.

*Saturday, 2010 November 13:* Carl steps into the pedals of his new carbon-frame bike, a Trek Madone 5.2, at the Trek Superstore in Albuquerque. Though not quite lighter than air, the bike is, nonetheless, a major step up from the aluminum-frame Raleigh he leaves behind; in addition to weight, a major advantage of carbon over aluminum is that it is not nearly as stiff, thus providing a far less jarring ride on bumpy roads. Carl cruises to the Flying Star at Rio Grande and Griegos to fetch a latte and then pumps his way home, arriving just as it gets too dark to ride without a light.

*Thursday, 2010 November 25:* Jeremy and Eleanor are in Albuquerque for the Thanksgiving holiday. Friends Steve and Marjorie Rogers and Carl's PhD student, Zhang Jiang, join us for a Thanksgiving dinner of smoked turkey, sage dressing, apricot gravy, cranberry sauce, sweet-potato fries, chard and leeks, and fresh fruit (even mangoes). Karen orchestrates the complicated preparations, and the whole thing somehow comes together with everybody pitching in. Dinner is topped off by two desserts, the *Joy of Cooking's* pecan pie and a frozen maple-mousse pie with chocolate-maple sauce from the *New York Times*, both supervised by Eleanor and both winners.

*Saturday, 2010 November 27:* We all climb into the Civic hybrid and drive to Sandia Crest, which though just behind the house, is 4,400 feet higher. It's a clear, cold day, and it's even colder at the crest, with a stiff wind blowing from the Albuquerque side. The objective is to see the three species of rosy-finch—the gray-crowned, the brown-capped, and the black—which disperse to different parts of northern and western North America to breed, but gather for the winter months at Sandia Crest and nowhere else. The day is a success, as all three species make an appearance. They fly acrobatically in the high wind, settle into bare aspens near the Crest House, and feed at the nearby feeder, giving us a clear view of their finely chiseled wing markings and subtle pinks on wings and breast.

*Sunday, 2010 December 19:* As his internship in Tucson ends, Jeremy organizes a tour of the Chiricahuas. Carl and Karen drove from Albuquerque on Friday, and Eleanor arrived by train (her brother's idea) from Pomona at 3:00 am Saturday morning. We and six of Jeremy's Tucson friends gathered yesterday morning at the house where Jeremy has been living and took off for the Chiricahuas at 8:00 am—Eleanor didn't get much sleep—for a day of hiking through the hoodoos of Chiricahua National Monument. As sunset approached, we drove across the crest of the Chiricahuas and settled in as the only guests at the Southwestern Research Station, deep in Cave Creek Canyon. Today we hike up Silver Peak Trail, failing to make the summit because of a very delayed start caused by too much birding in the early morning and the Forest Service's concealment of the trailhead behind a cluster of buildings at the Portal Ranger Station. The trail traverses a golden grassland studded with blue and red spires of expired century plants and then enters an oak-juniper forest, where the last of Jeremy's friends take their leave to return to their busy lives in Tucson. We continue a bit farther and stop for a very late lunch on a big rock that protrudes from the mountainside. Underneath a gnarled alligator juniper—to be honest, there's no such thing as an ungnarled alligator juniper, but not all are as big as this one—we munch on havarti and avocado sandwiches, veggie chips, and apples and take in expansive views over southern New Mexico. Starting reluctantly down the trail, we agree that the Chiricahuas deserve more of our attention.

*Tuesday, 2010 December 21:* Clouds obscure the promised lunar eclipse at 1:30 am, but at dawn, the same clouds, thinned to ripples, make amends by participating in a spectacular sunrise, perhaps the grandest solstice sunrise ever. Carl at the house and Karen on her regular morning walk in the foothills stand transfixed as the whole bowl of sky is illuminated. Bright orange above the Sandias marks the Sun's position; the orange gives way to a riot of vivid pinks finely interspersed with the deep blue of dawn sky, extending to the horizon in all directions.

*Sunday, 2010 December 26:* Karen, alone in Albuquerque after Jeremy, Eleanor, and Carl decamped to Park City on Friday for a week of skiing, joins Paula Kahn for an afternoon of snowshoeing at the top of the Sandias. At the Kiwanis hut, they encounter a Tucson birder who is seeking the fabled rosy-finches. He took the tram to the top, only to discover that he needed to slog a mile and a half through deep snow to see the finches at Crest House. Karen and Paula encourage him to think the remaining half a mile can be done. Back at the Crest House themselves, they find the Tucsonite, and they all get superb views of the three species of rosy-finch as the birds gorge on seed scattered on the snow-covered Crest House deck. Karen pronounces her first day of snowshoeing a success.

*Monday, 2010 December 27:* Jeremy, Eleanor, and Carl, in Park City with Doug and Sherry's entire family, including six-month-old grandchild Elise, take a day off from skiing for a birding expedition to the Great Salt Lake, organized by Jeremy's Tucson friends Ben Rackhan and Ashley Pedersen. Joined by Doug and cousin Jeff, they drive across the

causeway to Antelope Island, stopping to view American kestrels, northern harriers, California gulls, eared grebes, and a lone common merganser. The island evokes the 18th Century American West: 30 pronghorn, stalked ineffectually by two coyotes, move deliberately along a ridge above the road; a big herd of American bison grazes contentedly on the flats; a pair of great horned owls, massive and imperturbable, perch in the trees at the Fielding-Garr historic ranch, waiting patiently for dark to begin patrolling the surrounding grasslands for rodents.

*Wednesday, 2010 December 29:* Heavy snow all day leaves the Park City slopes with a foot of powder by mid-day, giving Jeremy, Eleanor, and Carl one of their best afternoons of skiing ever. They glide and carve and crunch their way down the powder-covered runs beneath the SilverLode lift line, always finishing up by schussing through Detonator Adventure Alley as it winds sinuously through the trees just above the lift.

*Friday, 2011 January 7:* Jeremy is assisting Princeton geology graduate student and fellow Rice undergraduate, Blake Dyer, in his field work in the Southwest. Arriving late last night at the canyon of the San Juan River, they unknowingly camped just a meter from the canyon rim. This morning they awake to a spectacular view of the Goosenecks and to a temperature of 14° F, four inches of snow on the ground, and the sound of ice chunks crashing against each other in the river far below. They descend the Honaker Trail to the big rock that was the upward extent of the ascent of the same trail during the family's San Juan rafting expedition in the summer of 2005. Prepared for cold though Jeremy and Blake are, it defeats them nonetheless, and they decide to beat a retreat to the warmer climes of southern Nevada tomorrow.

*Saturday, 2011 January 15:* Carl clicks sadly through photos of the flooding in Brisbane, recognizing familiar sights and sites that were flooded on Thursday and Friday. Today's big story is of thousands of volunteers lining up at the entrance to the Mt. Coot-tha Botanical Gardens, where Carl begins his biking circuit to the summit of Mt. Coot-tha. Boots on feet, hats on head, shovels and brooms in hand, they stand ready to begin the massive clean-up of the muddy mess left by the flood waters.

*Wednesday, 2011 January 19:* Jeremy, Blake, and Blake's advisor, Adam Maloof, drive into the San Andres National Wildlife Refuge, which is located in southern New Mexico, about 30 miles northeast of Las Cruces. The Refuge includes most of the San Andres Range and is home to the densest population of mountain lions in the US—this does not mean that you're tripping over them—and a remnant herd of desert bighorn sheep. It is completely surrounded by White Sands Missile Range and thus is off-limits to the public. The party has secured special permission to do field work in the Refuge from the Fish and Wildlife Service, but must be escorted in because of sensitive NASA facilities en route. They drive in to a campsite in a small wash that feeds into White Sands National Monument. This is rugged Chihuahuan desert, with creosote bush, ocotillos, prickly pear, chollas, and yuccas dotting the landscape. It is one the few places in the lower 48 where in a region of this size, you can be assured no other humans are around. The party begins its task of sampling the Carboniferous (300–350 million years ago) limestones that make up the backbone of the range, the goal being to investigate carbon cycling and climate in this antique period. They keep in mind the admonition not to touch any metal objects on the ground and hope that no new metal objects rain from the sky.

*Thursday, 2011 February 3:* Eleanor is in sunny southern California, and Jeremy is in Washington, DC, having started a three-month internship with the American Geophysical Union last Monday. Washington was spared the brunt of the recent storm of the century, but Karen and Carl caught the storm's tail in Albuquerque and learned that even a flick of a dragon's tail is something to remember. Nearly a foot of snow fell at the house on Tuesday and Wednesday, and dawn this morning brings a temperature of –10° F, by far the coldest we've ever seen at the house. Karen cancels her regular, hour-long morning walk in the foothills, the third cancellation in a row, and Carl prudently suspends bike riding till things warm up.

*Wednesday, 2011 February 9:* The AGU assigns Jeremy to attend congressional hearings, and this morning he takes in one on waste, fraud, and corruption at NSF, NOAA, and NASA. Carl, just finished serving on an NSF review panel, joins Jeremy for lunch to hear about the experience. The NSF Inspector General's opening statement contained a tag line saying that NSF has identified \$500,000 in annual savings in the budget for refreshments served to review panelists at NSF. This prompted a ten-minute discussion of why NSF is serving refreshments at all, a discussion terminated when the ranking Democrat, Chaka Fattah of Philadelphia, declared that if you are going to fly in the top scientists in the country to DC, you can at least give them coffee and doughnuts. Carl knows that NSF Headquarters, while not quite a food desert, is not where you go for the food. Panelists are sent across the street to a shopping-mall food court for lunch, even though a working lunch in the meeting room would be more efficient. One wonders why Congress can't summon the simple courtesy to thank scientists for volunteering their time to help run agencies like NSF.

*Friday, 2011 February 25:* Carl arrived in Brisbane yesterday, intending to spend nearly three months working with colleagues at the University of Queensland. It's late summer in Brisbane, shirt-sleeve weather, with temperatures falling to the upper 60s overnight and peaking in the mid 80s during the day. As Carl strolls to Mr. Beans this morning for a flat white, the Sun peeks from behind mounds of white clouds that front a limpid blue dome of the sort seldom seen in the northern hemisphere (well, maybe in New Mexico).

Walking near the wide, muddy Brisbane River reveals considerable damage from the recent flood: homes and businesses gutted, private boat ramps tossed about with abandon, erosional scouring of the high banks, mud deposited in low fields above the river. The CityCats, large catamarans—river buses—that cruise up, down, and across the river, are operating, but about a third of the stops are closed, the flood having swept away the ramp and dock, leaving only a few large, forlorn wooden posts to mark the position of the former dock.

*Sunday, 2011 March 13:* Eleanor and Pomona friends are spending Spring Break on Catalina Island. They are camped at Two Harbors, the narrow neck at the northern end of the island where one can easily walk from one side of the island to the other. Yesterday they did two hikes, one to a local peak to take in the expansive views of the Pacific and the mainland and the other northward up the coast to a small public beach. Today they kayak along the coast, watching harbor seals and California sea lions frolic about their boats and trying to distinguish Clark's from western grebes, the most rewarding North American grebing task, given that Clark's and western are our prettiest grebes, but not easy under any circumstances. Their campsite is idyllically situated, right next to the beach, caressed by gentle ocean breezes, but they plan to move on to relatively busy Avalon on Tuesday.

*Friday, 2011 March 18:* Eleanor and friends reluctantly leave Catalina Island. They spent the last three days at a rented house in Avalon, which was advertised as sleeping ten, but managed to accommodate twelve. They had an obligatory breakfast at the iconic Pancake Cottage, walked to the Wrigley Botanical Gardens, and snorkeled in the kelp forest that thrives in the shallows just off the island. The water was frigid, so snorkeling time was limited, but even so, they were in the water long enough to attract the attention of a very friendly California sea lion, which brushed against them as they swam. Eleanor is an old hand at kelp forests from her years of summer camp on Catalina, but for many of her friends, this was a first encounter, and they loved it.

*Sunday, 2011 March 20:* Jeremy in Arlington, Virginia, at 10:00 pm EDT, Karen in Albuquerque at 8:00 pm MDT, Eleanor in Claremont at 7:00 pm PDT, and Carl in Brisbane at noon tomorrow engage in a 1-hour, 45-minute Skype conference call to discuss Eleanor's plans for the summer and Jeremy's choice for graduate school. Eleanor has to decide between two very attractive internships at the Woods Hole Oceanographic Institution (WHOI), one studying right whales and the other pilot whales—every girl's dream of marine biology come true. Jeremy has been admitted to Earth Science PhD programs at Arizona, Penn State, Stanford, Caltech, Chicago, and Princeton. He has narrowed his choices to the first three. Karen *strongly* favors Stanford, but, guess what, Jeremy is a free agent, and it will not be an easy decision.

*Monday, 2011 March 21:* Eleanor decides to participate in the pilot-whale research in Professor Peter Tyack's WHOI group for the summer. The group attaches sound and behavior recording tags, called DTAGs, to long-finned pilot whales to learn how they communicate as they frolic and forage. The group's study site is in the Alboran Sea, the westernmost portion of the Mediterranean, between Spain and Morocco. After spending time at Woods Hole, at the base of Cape Cod, Eleanor will join the group's Spanish field work in mid-August. Expect entries recounting Eleanor's jaunts from the Costa del Sol onto the sun-soaked Alboran Sea. Life is tough.

*Wednesday, 2011 March 23:* Jeremy makes his mother happy by accepting Stanford's offer of admission to the PhD program in the Department of Environmental Earth System Science. He also accepts a three-year Stanford Graduate Fellowship, one of about 100 awarded to entering graduate students this year. With this decision Jeremy will enter Stanford for the summer quarter, during which he plans to join Professor Page Chamberlain's research group for field work in Mongolia.

*Saturday, 2011 March 26:* Jeremy is spending the weekend with cousins Kevin and Meredid at their home in Hanover, Maryland, one of many such weekends during his DC spring. Uncle Doug and Aunt Sherry are in residence this weekend as well, checking on the progress of granddaughter Elise. Today the whole group drives to Pennsylvania to tour John James Audubon's Mill Grove estate and farm near the town of Audubon. At age eighteen, in 1803, John James was sent from France, ostensibly to run the estate, but mainly to avoid Napoleon's draft. His childhood interest in birds deepened and broadened at Mill Grove, and the rest is history. The group does a little birding of its own on the property, thinking about how times have changed. Though there were almost no birders in Audubon's time, what few there were made a heck of a lot more noise than modern birders, what with the then-standard practice of shooting first and identifying later.

*Thursday, 2011 March 31:* Eleanor celebrates receiving Pomona College's Downing Scholarship, which will send her to Cambridge University for the next academic year. In January, she was one of 21 finalists for, but not a recipient of one of fourteen Churchill Scholarships, which would have accomplished the same objective. In the face of that disappointment, she has been waiting impatiently to learn the fate of Pomona's single Downing Scholarship. Eleanor has already been admitted to Cambridge's Zoology Department and has arranged to work under the supervision of Clair Spottiswoode studying a Zambian egg collection and what it can reveal about parasitic birds and their hosts. She will earn an MPhil by the end of her Cambridge year.

*Sunday, 2011 April 3:* In Brisbane Carl participates in his second Birds Queensland birding expedition and extends his life list with the sighting of a very spiffy striped honeyeater.

Karen spearheads the organization of this evening's fund raiser for the Jewish Family Service. Held at the Albuquerque Museum for the first time, the event is a rousing success, raising 50% more than last year. This is Karen's last major service for JFS before she goes off the board this summer.

*Tuesday, 2011 April 5:* Jeremy learns that he has been awarded a National Science Foundation Graduate Research Fellowship. NSF Fellowships, the premier US awards for PhD study in the sciences, provide generous support for three years of graduate study. Jeremy will use his fellowship at Stanford; combined with the Stanford Graduate Fellowship, the NSF gives him five years of funding, which should be enough to complete a PhD.

*Sunday, 2011 April 10:* Carl embarks on a 50-mile bike ride to and from the Boondall Wetlands, northeast of Brisbane, on a sunny, early autumn day. The hardest part of the ride is to negotiate the unfamiliar maze of bike trails and bike lanes that skirt downtown Brisbane on the north and west. In the midst of what turns out to be the grossest deviation from the direct route, Carl rides blithely through a pleasant park past a spacious stadium where an early-season baseball game is being played. Then he pulls up short: this isn't spring, it's not America, and Aussies don't play baseball. Riding back, he confronts a woman, watching the game through the outfield fence, with these incontestable facts. "Of course, we play baseball," she replies pleasantly. "This is the championship game for the Windsor Royals." Not an American name for a baseball team, to be sure, but then something here has to be Australian. "My father helped to found the team and to build this stadium nearly 50 years ago. My husband has been playing baseball for 50 years, and he's out there right now playing first base, but he's really getting too old for it," an assessment confirmed when he promptly muffs an easy pop fly. Carl rides on, pondering whether this could in any way provide encouragement for his personal objective to eliminate American football (probably not), and shortly reaches his objective, a bike trail that accompanies Kedron Brook for its last ten miles as it morphs from a bubbling urban stream to a tidal estuary. A lone yellow-billed spoonbill, feeding placidly in a billabong in the wetlands, is, as a lifer, the other highlight of the day.

Jeremy joins Uncle Jay, cousin Sarah, and Sarah's three kids, Jacob, Max, and Dillon, to explore the Steven F. Udvar-Hazy Center of the National Air and Space Museum. The Udvar-Hazy Center, which is located next to Dulles International Airport, houses a treasure trove of aeronautical artifacts. The party sees an SR-71 Blackbird spy plane, the space shuttle Enterprise, and a Phantom jet of the sort Uncle Wally worked on when he was in Vietnam. Jeremy is pleased to see Jay, Sarah, and the kids for the first time since his marathon train trip around the country in the autumn of 2009. At a Trader Joe's after the museum tour, Jeremy is impressed by the tempest that accompanies thirteen-year-old Jacob, nine-year-old Max, and seven-year-old Dillon and by the trail of destruction the tempest leaves in its wake.

*Saturday, 2011 April 23:* Jeremy joined Blake in Princeton yesterday, and today they drive to Cape May, the premier birding site on the East Coast. They see northern gannets, a palm warbler, yellow-rumped warblers, eastern towhees, dozens of prairie warblers, and a lone scissor-tailed flycatcher that has strayed far from its range in the south-central US.

*Monday, 2011 April 25:* Karen endures 40-mile-per-hour winds and 30° F temperatures on her regular hour-long morning ramble through the foothills. It's spring in Albuquerque, and that means wind and lots of it.

*Saturday, 2011 April 30:* At mile 54 of a 68-mile ride to Redcliffe, on a new bike acquired after he was run over two weeks ago by a Malaysian student driving in the wrong lane, Carl stops at a tree-fringed wetlands meadow to get a better look at a dozen white-breasted woodswallows perched in a trailside tree. He finds himself in the midst of a dazzling aerial display put on by a flock of rainbow bee-eaters. They fly acrobatically from perch, twisting and turning and diving and swooping, painting stripes across the sky in yellow, green, azure, and orange-red, with the occasional big black splotch as they fan their tails, and then return to perch to beat a captive bee or damselfly senseless against a branch before swallowing it down.

*Sunday, 2011 May 1:* Yikes! Snow on May 1 again, just like last year. Karen watches in dismay as snow blankets the decks and settles on the trees and ground.



*Thursday, 2011 May 12:* Carl sits quietly on a low stone wall overlooking the lake at the University of Queensland, eating a Subway sandwich for lunch and watching the cormorants and ducks frolic in the lake, as he has done many times since February. As he takes the final bite of the final sandwich on his final day in Brisbane, a noisy miner perched in the tree above poops onto his sandwich wrapper. A signal that it's time to go home.

*Friday, 2011 May 13:* Eleanor is inducted into Phi Beta Kappa in a 5:00 pm ceremony held in Pomona College's Lyman Hall, the first event of a weekend that will culminate in Pomona's commencement exercises on Sunday morning. After the ceremony, it's on to falafel, gyros, and chicken in pita, as Eleanor and friends stage a catered dinner for 65 people at the Greek Theater on the eastern edge of the Pomona campus. The Caves family has turned out in force to honor Eleanor: Jeremy, Karen, Carl, Uncle Doug and Aunt Sherry, Aunt Linda and Uncle Tom, cousins Sonia and Guy and Natalie and Natalie's 2-year-old daughter Holly are all in attendance.

*Sunday, 2011 May 15:* As a pair of starlings builds a nest in a towering sycamore, commencement commences. The crowd is garbed in Pomona blue, courtesy of the plastic panchos handed out against the rain, the first ever rain at a Pomona commencement and the first on this day in Claremont in 118 years. But, as the graduates and faculty march in, the Sun breaks through the low clouds, and fitful sunshine graces the ceremony. Secretary of Energy Steven Chu gives an inspiring commencement speech. He compares the time 47 years ago (47 is a special number at Pomona), when America geared up to answer the technological challenge of the Soviet Union, with the present, when the technological challenge of climate change confronts our country and the world. He predicts that 47 years hence we will have confronted the challenge, or we will find that our country has become the backwater of the advanced world. Eleanor strides briskly across the stage to receive her degree as Jeremy, Karen, Carl, and the two aunt-uncle pairs look on proudly.

*Monday, 2011 May 16:* Eighteen black, white, and red American avocets fly in just as we are tearing ourselves away from the Salton Sea National Wildlife Refuge. We're on our way to southern Arizona for a few days of post-graduation vacationing, and we stop, along with Doug and Sherry, in mid-day for a brief birding break at the southern end of the Salton Sea. The brief break turned into five hours, as the birds redeem an otherwise forgettable landscape: Caspian terns, verdins, a clapper rail, common ground-doves, black-necked stilts, burrowing owls perched on irrigation ditches like sentinels, and finally, those eighteen avocets.

*Thursday, 2011 May 19:* Doug, Sherry, Tom, Linda, and the four of us have spent the last two days in Tucson. The original plan was to spend our Arizona time in Cave Creek Canyon, witnessing the spring migration through the Chiricahuas, but the whole range is burning, so we retreated to Tucson, staying at Ken and Mary Karrels's Double K Ranch B&B, which caters to our party's railroading and birding interests. There is a garden railway in the backyard, Doug and Sherry sleep in a former Southern Pacific caboose, and the B&B is within easy walking distance of Agua Caliente Park, a peaceful oasis in the desert and hence a prime birding site. On Tuesday, we all drove to the top of Mount Lemmon, behind Tucson, sighting a male and a female hooded oriole at a stop about halfway up and a magnificent hummingbird at a feeder across from the ski resort at the top. Yesterday Doug, Jeremy, Eleanor, Karen, and Carl drove to Madera Canyon, south of Tucson, where they sighted wild turkeys, bridled titmice, and many warblers, but failed to find the elegant trogon, which was the prime objective. This morning, we visit Agua Caliente one last time before departing and spot a great horned owl, a lark sparrow, and the flying fireball called a vermilion flycatcher. All the birders have increased their life lists considerably since leaving southern California, and Tom, Linda, and Karen have been patient enough to let them do that. As Doug, Sherry, and Jeremy drive to the Tucson airport, they make yet another sighting, a Harris's hawk soaring high overhead.

*Saturday, 2011 June 4:* Eleanor flies to Boston to begin her summer-long adventure at WHOI.

*Wednesday, 2011 June 22:* Jeremy proceeds to Palo Alto to enter Stanford officially. On Saturday, with his research group, he will fly to Mongolia for three weeks of field work.

*Monday, 2011 July 4:* After arriving in Ulaanbaatar (Ulan Bator) on June 26, Jeremy and seven other geologists proceeded west and south to the southern side of the Khangai Mountains and then headed north into these broad-shouldered mountains, sampling the local food and the local (Oligocene) rocks along the way. Today they find themselves in a lush mountain valley, surrounded by intensely managed forests, looking like a little piece of Switzerland plopped into central Asia. They search for a Mongolian yurt, called a ger, whose occupants have available a supply of fermented mare's milk, called airag (kumys in Russian). Mare's milk is higher in lactose than cow's milk and cannot be consumed raw by the lactose-intolerant Mongolians; fermentation converts the lactose into digestible lactic acid, ethanol, and carbon dioxide, producing a fizzy, mildly alcoholic drink. After the three drivers find an appropriate ger, Jeremy and one other student, the three drivers, and Ganaa, the translator from Ulaanbaatar, go inside the one-room ger. Gifts are exchanged with the owners, and the group sits down to an impromptu meal of parmesan-like cheese,

bread, home-brewed vodka, and airag. Ganaa explains that these nomads are perpetually lonely and so willingly trade meals for gifts and news from the capital. Most Westerners don't take to airag, certainly not on the first try, but it instantly becomes Jeremy's favorite drink in Mongolia.

*Wednesday, 2011 July 6:* Jeremy and co-workers retreat from cold and rain to the Fairfield Cafe and Bakery in Tsetserleg, the capital of Mongolia's Arkhangai province, which lies on the northeastern slopes of the Khangai Mountains. Airag notwithstanding, Jeremy is starved for espresso. He orders a latte and then goes back for a flat white.

*Saturday, 2011 July 16:* On the fourth anniversary of his mother's death, Carl's eyes alight on an 8×10 photograph of the 2004 Thanksgiving Day dinner at the home of his parents, Morris and Mary. The photo was given to Jeremy by Uncle Doug and Aunt Sherry when Jeremy graduated from Rice in 2009. Jeremy and Eleanor, most prominent in the picture, sit at a foreground table with their cousins, Sonia and Natalie, and Sonia's husband Guy. Jeremy smiles broadly at the camera, and Eleanor is about to pop a green bean into her mouth. At a bigger background table sits the rest of the family, caught in the festivities of a Thanksgiving dinner. This photo, rich with memories of shared good times, is also a record of loss, for three of the eleven occupants of that background table have died since 2004: Morris in 2006, Mary in 2007, and Diane, Carl's niece-in-law, in 2010. Why did they die? For Morris and Mary, the answer is easy: their bodies wore out at age 82; they passed away after leading full lives, partners for just over 60 years. For Diane, there is also an easy answer: she died at age 31 because she was in the Hotel Montana when it collapsed in the Haiti earthquake. For most of us, faced with a life cut off in its prime, that answer just doesn't seem sufficient. It is the how, not the why, and we yearn for more, for a why that gives the death meaning. Yearn as we might, our yearning is unrequited—and should remain so. Finding meaning in an untimely death only minimizes the tragedy. Diane's life was full, but it was not complete. Nothing can ameliorate the tragedy of that uncompleted life. All we can do is to cherish the memory of what we had.

*Tuesday, 2011 July 19:* Jeremy and fellow student Hari Mix wake as the rising Sun illuminates the glassy surface of Lake Baikal. The two are on a leg of the Trans-Siberian rail line; this morning its route hugs the southern shore of Baikal, the deepest, oldest, most voluminous (roughly 20% of the world's unfrozen fresh water) lake in the world. The two have second-class tickets on a local train from Ulaanbaatar to Irkutsk, which entitles them to two bunks in a four-bunk cabin. They left Ulanbaatar on Sunday evening, endured ten hours of border formalities, first in Mongolia's Sühbaatar and then, 30 miles farther on, in Russia's Naushki. For the two geologists, central Asia is a paradise, with compressional ranges and gigantic rifts all around, all resulting from India's implacable charge into Asia. Baikal is nestled in in one of the grandest of the rifts. At mid-day the train pulls into Irkutsk, which sits on the Angara River, about 40 miles downstream from the lake, surrounded by the boreal forests of southern Siberia.

*Thursday, 2011 July 21:* Hari having left, Jeremy wanders around Irkutsk on a sunny day with temperatures pushing into the high 70s F. He finds a pleasant, leafy city, whose ornate wooden buildings reflect its role as the center of the 19th Century wooden-architecture movement in Siberia, and he tours the Irkutsk Art Museum, which has a fabulous collection of Asian art, the largest in Russia. Yesterday, Hari and Jeremy ventured from Irkutsk to Lake Baikal, where they saw the famous Baikal (or nerpa) seal, the smallest, only completely freshwater, and most isolated of the true seals, found here thousands of miles from its nearest salt-water cousin. Give American boys of all ages a lake—what could be better than the biggest lake in the world?—and they start skipping rocks. So it is that Jeremy and Hari spent a good part of their day skipping rocks across the placid surface of Lake Baikal, drawing a crowd of Russians unfamiliar with this oddly compelling, quintessentially American activity.

*Friday, 2011 July 29:* Karen and neighbor Kate Fry are in Massachusetts to visit Eleanor. This evening Nina Karnovsky, Eleanor's mentor at Pomona, invites Karen, Kate, and Eleanor to the home that Nina's parents have rented year-round for over ten years in Spohr Gardens, a six-acre woodland that fronts on Oyster Pond, just north of Woods Hole. Everyone relaxes over wine in a classic New England setting of leafy woods and shimmering water.

*Saturday, 2011 July 30:* Karen and Kate are staying at the Captain Tom Lawrence House in Falmouth. This morning Jeff takes the bus from Boston to Falmouth and joins Eleanor, Karen, and Kate for a morning bike ride along the Shining Sea Bikeway from the House to Woods Hole. After lunch and a tour of the WHOI Museum, the party goes for a swim at WHOI's private beach. To ensure they experience directly the flavor of Cape Cod, the group loads up on take-out seafood from the Clam Shack and hosts a seafood dinner for Eleanor's WHOI friends. After depositing Jeff on his return bus, Kate and Karen walk to the Knob at Quisset Harbor to watch the Sun set over Buzzards Bay. Though the two desert dwellers are unwilling to yield pride of place to a Massachusetts sunset, they concede the beauty of this ocean sunset, despite the inability, as always, to see the hoped-for green flash.

*Sunday, 2011 July 31:* Jeremy returned to America a week ago, flew to Seattle the next day, and there joined his research group for field work in central Washington near Leavenworth and in Montana around Dillon. Today he

takes the Greyhound bus from Dillon to Salt Lake City, where he will board a plane to Tucson. There, at the Udall Foundation's annual conference, he will, as an alum, help with orientation of new scholarship recipients, moderate group discussions of science policy, and lead birding walks.

The bus ride to Salt Lake is an experience. The bus stops at least hourly for a smoking break. Jeremy discovers that he is the only person on the bus who doesn't smoke. At the first stop, in three-building Lima, Montana, Jeremy orders breakfast at the local cafe and joins two guys who are taking the bus from Spokane to Las Vegas. Having never before met a geologist, they are pretty excited when Jeremy tells them what he's doing. After some casual conversation, they ask where he is going to school. "In California," he replies, and up pipes a nearby guy, "I hope that state falls into the ocean." Before Jeremy can say anything, one of his correspondents takes the conversation in an unexpected direction: "Well, it absolutely will. That whole state is just a shelf. You can swim right underneath it and see the underside of the continent. It's just waiting to crack off. So is Florida." After a vigorous discussion of the cultural, political, and geological aspects of California's imminent calving into the ocean, during which the geologist is ignored, the group suddenly turns to Jeremy and asks if this is his intended subject of study. Astonished, appalled, aghast, and amused, Jeremy punts on educating and settles for discretion: "No, I'm in a completely different field."

*Monday, 2011 August 1:* Karen and Kate drive to Provincetown, at the tip of Cape Cod, for a whale-watching expedition to the Stellwagen Bank National Marine Sanctuary. One-hundred-plus whales show up to frolic around the boat, blowing, breaching, tail slapping, and showing off their youngsters for the boat-bound humans. Karen and Kate have no time to think of getting sea-sick, as they are too busy rushing from one side of the boat to the other to take in the spectacular show the whales are staging.

*Tuesday, 2011 August 16:* Eleanor arrives at the Tyack group's apartment, in the center of the small Spanish beach resort of Roquetas de Mar, after a day of traveling from Woods Hole. Determined to stay awake for the day, she joins the group for grocery shopping, ice cream and iced coffee, a dip in the nearby Mediterranean, and some work, finally going to bed at 10:00 pm. Her initial impression is that the Costa del Sol is hot, not just a little hot, but very hot—and this from someone who grew up in Albuquerque. The bedrooms in the apartment have room air conditioners, but that's the extent of relief from the oppressive heat, except for those dips in the sea.

*Thursday, 2011 August 18:* This is Eleanor's first day on the water working with long-finned pilot whales. Getting up at 5:00 am, she and the rest of the crew drive to the dock, load the boat, and head out to a depth of 1,000 meters to search for the whales. They don't have to wait long; after five minutes, more whales than they can handle arrive on the scene. The crew tags a couple of whales with DTAGs, and then Eleanor and a pilot climb into an eight-foot-long zodiac from which Eleanor is to make behavioral observations. The zodiac accompanies a pod of about fifteen whales, including one large male longer than the zodiac and three mothers and calves, one so new its dorsal fin is still flopping.

Pilot whales don't live life in the fast lane. The pod swims and rolls lazily around the zodiac, which can easily stay right in their midst, like a member of the pod that can't dive. The water is a deep blue, clear enough to see the whales down to nearly 50 feet, and the whales put on a grand show of diving, rolling, whistling, tail slapping, blowing bubbles as they hang vertically just below the surface, and spy hopping to get a good look at the humans in the zodiac. It's not clear who is observing whose behavior. The day finally winds down, and Eleanor finds herself back at the apartment at 8:00 pm, exhausted after what the others call a short day, but grateful for an amazing first exposure to her subjects.

Jeremy is in one of his favorite places, Glacier National Park. He joined Blake on August 9 in Las Vegas, for a second round as field assistant, and since then, the two have roamed the West, ending up in Montana. Today is a day off, which merely means they aren't actively scouting for or taking geological samples. At dawn the day is gloomy and grey, the sky completely overcast, but as they pull up to the trailhead at Many Glacier, the clouds begin to dissipate, and they are treated to a view split dramatically by a layer of clouds, the broad, glacial valleys below and the seemingly disconnected, brightly lit peaks and horns of the mountains above. As the Sun gains strength, they hike up to the Continental Divide at Swiftcurrent Pass, where they take in the magnificent view of rugged peaks rising 4,000 feet above the lake-littered valleys below.

*Sunday, 2011 August 29:* Jeremy is in Albuquerque for a week before driving to Stanford for the fall quarter. He and Carl, together with Carl's physics colleague, Dave Dunlap, and his son Matthew, stride deep into the Sangre de Cristo range to a steep-sided bowl in which nestle the two small, spring-fed Trampas Lakes. After a pause for rock-skipping at one of the lakes, a further 600-foot climb up a very steep, but grassy slope deposits the party on the rim of the bowl, where they make their way along a knife-edge to the 12,400-foot summit of Sheepshead Peak, 1,000 feet above the lakes. As they eat lunch at the summit, they enjoy a spectacular 360° view of northern New Mexico. The massive form of Truchas Peak, the second highest and most rugged peak in New Mexico, dominates

the view to the south, just across another deep bowl. Though the Sun shines brightly, towering white thunderheads, spitting lightning and leaking rain, cruise ponderously across the sky, eventually prompting a departure. The party manages a slow descent down another steep slope, reaching Trampas Lakes just as thunder and rain overtake them.

*Monday, 2011 September 5:* Eleanor spends her last day on the water before departing for Cambridge on Thursday to take up her Downing Scholarship and then on to Lusaka on Sunday to begin her MPhil research project. Today is a perfect day for what turns out to be an epic, 26-hour, data-collection marathon. After a full day of tagging whales and collecting the resulting behavioral data, Eleanor and Leigh, the chief tag technician, clamber into the zodiac as the Sun nears setting, motor out onto the glassy smooth water, and then just sit, the motor off, to revel in the scene. Glowing ptenophores light up the glassy smooth water, sleek swordfish and bulky ocean sunfish (mola mola) leap about the boat, and a pod of fifteen pilot whales jostles for position around the boat. It is a fitting capstone to Eleanor's Mediterranean adventure.

*Saturday, 2011 September 10:* Eleanor, in England for three days, takes the train from Cambridge to London's Kings Cross station and then the underground to Kensington. Slipping on her heels, she knocks on the door of a ritzy private residence and enters a world of wealth that is considerably outside her ordinary experience. President Oxtoby of Pomona College has organized a gathering of Pomona alumni at this London home of a wealthy Indonesian alumnus. Eleanor participates in some sparkling lunch conversation, managing to mention that she fit this event into her own busy schedule between her arrival from Spain on Thursday and her departure for Zambia tomorrow. At the after-lunch session of cigars and cognac, the cognac is served from its own presentation decanter, which Eleanor finds so attractive that she asks the host if she can have it. After he obliges, one of the household staff asks if she knows what she is getting. No, she doesn't. He informs her that this is not just any ordinary cognac, it's Remy Martin Louis XIII Decanter Cognac, valued at over £1,000 (about \$1,600). The crystal decanter by itself is often resold for over £100. She lugs the heavy, empty decanter back to Cambridge—carefully—impressed by her own boldness.

*Monday, 2011 September 12:* Eleanor arrives in Lusaka at 6:20 am after an eleven-hour overnight flight from Heathrow. She and Claire spend the day and evening preparing for the drive tomorrow to Nansai Farm, just north of Choma, which is about 150 miles southwest of Lusaka. Lusaka itself is chaotic, the roads crowded with cars, bicycles, and pedestrians, all jostling for position, the bicycles piled high with stuff and the pedestrians with all sorts of things stacked on their heads. The shopping malls are packed with people—but with the average Zambian living on less than a dollar a day, who's buying?—and the grocery stores offer produce that even Eleanor finds expensive—\$5 for two bell peppers. The day involves a mugging, quickly reversed, and several hours of repair for the “new” twenty-year-old Land Cruiser that is to be Claire's field vehicle.

*Tuesday, 2011 September 13:* Up at 5:00 am and out at 5:30, Claire and Eleanor commence the six-hour drive to Nansai Farm, which hosts the egg collection Eleanor will be studying. Once clear of frenetic Lusaka, they enter the timeless African bush, a land of fields and forests and grasslands. Along the way they see thick-trunked baobabs, purple-flowering jacarandas, vervet monkeys, and birds galore. At Nansai Farm, owned and operated by Ian and Emma Bruce-Miller, Eleanor finds she has been transported backwards in time, to the late 19th Century. A working farm and game farm, Nansai is organized around a central house where one can relax on broad verandas while contemplating the beauty of the gardens and the surrounding countryside. The farm's activities are carried out by 70 workers and servants, who live on the property in “compounds,” a word that grates on Eleanor's sensibilities. After freshly squeezed lemonade and lunch with the Bruce-Millers on the veranda, the party proceeds to a pond on the property for a swim. Eleanor gets the first leeches of her life, but no one seems concerned, and they fall off after a few minutes. As the day winds down, Eleanor retreats to her room, which is a small, separate guest house, from which she has a pretty view of the garden.

Jeremy leads five Stanford sophomores on a loop trail into the Teton Range—up Paintbrush Canyon, over Paintbrush Divide, and down Cascade Canyon. Jeremy is TA'ing his advisor's sophomore-level field course on the geology of the Rocky Mountains. Today is one of two days off in Jackson from the formal field work, so Jeremy organizes this hike, reputed to one of the top ten loop hikes in North America. The group hikes up a steep trail to Paintbrush Divide, where they enjoy splendid views of jagged Mount Moran to the north, all three Teton pinnacles, Grand, Middle, and South, to the south, the deep blue of Jackson Lake, nestled in Jackson Hole, to the east, and the rugged Absaroka Range, where Jeremy did a 28-day NOLS wilderness trip in the summer of 2003, on the horizon in the northeast.

*Friday, 2011 September 16:* Eleanor has settled into a routine for her research. She gets up early, has tea on the veranda, and then bikes a couple of miles across the bush to the other large house on the property, where the egg collection resides. She works all day on the collection, interrupted only by the maid's serving her morning tea and lunch on the veranda, where she watches birds, antelope, horses, and baboons as they go about their own routines. One thing she has not gotten used to is dealing with servants: she always thanks them, and after they call her

"madam," she responds with "sir" or "madam" to them. She bicycles back to the main house at 6:00 pm, as dusk settles in, suspecting that a leopard is keeping an eye on her from the cover of darkness and bush.

The egg collection itself, assembled by a cantankerous Englishman, Major John Colebrook-Robjent, consists of thousands of eggs. He willed the collection to the British Museum, but it remains in Zambia, hostage to questions of national prestige and revenue. Eleanor spent yesterday poring over the Major's notes, which were increasingly haphazard as he approached death from AIDS in 2009. Today she begins collecting the spectrophotometric data on the eggs' coloration, which will be the basis of her MPhil thesis.

*Thursday, 2011 September 22:* Eleanor has finished with the nearly 1,000 eggs she is working on in the family Cisticolidae, which means her data collection is about half finished. She has found time to go birding several times with Claire, who is both a local expert and one of the most skilled birders in the world. Although Eleanor extends her life list every time she goes out, one of the joys of birding is becoming familiar with the common birds, and for a North American in Zambia, the common is also the exotic: the greater blue-eared starling, iridescent blue-green with bright yellow eyes (why couldn't we North Americans have gotten this beauty instead of the European starling?); the tiny malachite kingfisher, darting from perch to catch fish, its azure back contrasting sharply with a red breast; the hamerkop, an odd wading bird whose large bill and backward-directed crest make its head and neck look like a pick-axe; the grey go-away-bird, shaped like a roadrunner, but with a finch's bill, a prominent crest that goes up and down like Spock's eyebrows, and a call like a squeaky door closing; and the lappet-faced vulture, an enormous vulture whose naked red head contrasts with an elegant ruff of black-and-white feathers—think Elizabeth I without the wig.

As a reward for finishing half her project, Ian, neighbor Neal, and visitor Neville take Eleanor hunting. After one practice shot, fired at a tree, she is deemed ready to take on live prey. The party heads out in a truck to find puku, small antelope that are overly abundant on Nansai Farm. Eleanor ends up shooting two puku from the truck, both medium-sized males, each weighing about 200 pounds. The first takes three shots to bring down, with Eleanor feeling guilty the whole time. That one would have been sufficient, but the guys get such a kick out of the skinny, white, American girl shooting things that they have her try again. She kills the second puku with a single shot straight through the heart and lungs. The two puku will be cut up into one-kilogram chunks to be sold, though some is likely to appear at dinner as puku stew. Five bullets in her life, one tree and two puku—vegetarian Eleanor is left contemplating how a twitch of the finger can end a life.

*Monday, 2011 October 3:* Eleanor returns to Cambridge after an all-day flight from Lusaka. After much agonizing over what to do with the two puku skulls, Eleanor puts them in plastic bags and shoves them into her bags—Karen is unhappy, but she's not in Zambia—and fortunately faces no questions at either end of the flight. The skulls are to be buried in Claire's back yard till the bones are free of all attached organic matter.

*Sunday, 2011 October 9:* Autumn in New Mexico! As the Sun peeks over the Sandias, it lights up hundreds of brightly colored hot-air balloons, which hang nearly motionless in the western sky on this, the last day of the Balloon Fiesta. As the day progresses, the Sun shines brightly out of a cerulean sky, dotted with cottony clouds. Grasses, greened and grown by the monsoonal rains of late summer, stand tall and golden in the long-shadowed autumn sunshine. Chamisa shows off its finery, the grey-green branches tipped with the liquid yellow of October flowering, their musky odor scenting the air. And that air! So clear that the clouds tumble over the horizon a hundred miles away. As the Sun sinks from sight, it illuminates a delicate pink sunset that closes a perfect day.

*Saturday, 2011 October 15:* Jeremy, Karen, Carl, Karen's nephew David, his girlfriend Sarah Jane, and David's mom, Carin, gather at Carin's home in Menlo Park for a festive dinner. The centerpieces of the dinner are a vegetarian risotto and Sarah Bernhardt cookies for dessert. The cookies require an elaborate process of preparation, which absorbs Carin and Karen for several hours, thus leaving the risotto to Carl, who by following the recipe carefully, manages to produce a spectacularly delicious result. The cookies survive the preparation and are a big hit as well. Over dinner the group reminisces about shared good times in the Bay Area and the current activities of the Bay Area locals. Carl and Karen are spending an extended weekend with Carin, seeing the sights and touching base with Jeremy at nearby Stanford.

*Monday, 2011 October 17:* Karen flies home to Albuquerque, and Carl picks up the 2011 Max Born Award of the Optical Society of America at the OSA Annual Meeting in San Jose.

*Sunday, 2011 October 23:* Karen and Carl, accompanied by friend Janet Gaines, postdoc Josh Combes, and his girlfriend Robyn, walk out of the house and up the La Luz trail on a pretty fall day. The hike is nominally a substitute for one cancelled a year ago, which was to be for Carl's 60th birthday. As the party slowly ascends the endless switchbacks of the rock slide, where bits of snow linger in shadow from a storm three weeks ago, the sheer, pink granite monoliths of the Sandias, stained orange and chartreuse by lichens, tower a thousand feet above dark green conifers interrupted by the brilliant yellow of aspens in full autumn display. Not such a bad back yard.

*Sunday, 2011 November 20:* Carl, Josh, Robin, and PhD students Zhang Jiang and Jonas Anderson climb the apparently sheer walls of Cabezon Peak, a volcanic neck northwest of Albuquerque. It's Carl's third climb of Cabezon since 2004. He finds it just as daunting and more physically demanding than the previous two climbs. This ascent is distinguished by the sighting of a flock of gray-crowned rosy-finches foraging in the grass at the top, apparently taking a lunch break during their long migration to Sandia Crest, which is clearly visible to the southeast, 45 miles away as the rosy-finch flies.

*Saturday, 2011 November 26:* Eleanor has journeyed to Tackley, just north of Oxford, for an American Thanksgiving dinner with Uncle Kenny, Aunt Mary, and one of Mary's students. The meal is the real deal: a 79-pound turkey (that's price, not weight), stuffing, brussels sprouts, sweet potatoes, cornbread, cranberry sauce, gravy, and pecan and pumpkin pies. Eleanor and American friends cobbled together their own Thanksgiving dinner for an international crowd of over 20 last Thursday at a friend's Downing College apartment.

*Sunday, 2011 November 27:* Jeremy and five friends hike along the narrow peninsula between Tomales Bay and the Pacific, all the way to the end at Tomales Point, the northernmost point in Point Reyes National Seashore, where they munch their lunches while perched high above the Pacific. As they enjoy the big view over the Pacific, their attention is diverted to a chaotic scene about 300 meters out to sea. There is a sudden roiling of the water, a flashing of big fins, and a red stain spreading across the ocean. As they watch, this happens once and then again and yet again. They interpret the events as a great white shark munching its own lunch of harbor seals.

*Wednesday, 2011 November 30:* At Cambridge Union, near the Cam, Patrick Stewart speaks on "What It's Like to be Patrick Stewart." Eleanor, not a member of the Union and thus reduced to sneaking into the event through the connected coffee shop, bumps into Stewart as he procures a pre-talk coffee. He is as bald as ever. She is speechless, not even managing an excuse-me.

*Saturday, 2011 December 24:* A series of El-Niño-style storms in what was supposed to be a La Niña year have buried the Sandias in snow and left Sandia Peak Ski Resort with an unusually deep 60-inch base. Jeremy and Eleanor, in Albuquerque for the Winter Break, and Carl take the tram to the top and ski the long, sinuous runs of fresh powder on the far side. The conifers are decorated as in a winter wonderland, piled high with big glops of snow, from which dangle foot-long icicles that glitter in the bright sunshine. In mid-afternoon, Santa Claus puts in an appearance, ho-ho-ho-ing down the slopes on a snowboard. It's a great way to enjoy winter in New Mexico and a perfect prelude to flying off tomorrow for twelve days of vacationing in Florida, which will include siblings Carl, Doug, and Linda and every member of their families.

*Sunday, 2012 January 1:* Jeremy, Eleanor, Karen, Carl, Linda, Tom, and Sherry take advantage of a beautiful New Year's Day in south Florida to kayak and canoe the two miles from Pleasure Island in Everglades City to the inner fringe of the Ten Thousand Islands, where they spend the late morning and afternoon exploring the mangrove islands between Indian Key Pass and Sandfly Island. They find Sandfly aptly named, the flies so thick that they quickly abandon the idea of walking the trail around the island. Uncle Tom, who spent most of the autumn being treated for Waldenström's macroglobulinemia, a rare type of slow-growing, non-Hodgkin lymphoma, out-paddles everyone on the way back to the mainland.

*Monday, 2012 January 2:* On a day of sun and cloud, Jeremy, Eleanor, Karen, Carl, Doug, and Jeff explore the Gulf fringe of the Ten Thousand Islands off the coast near Everglades City. Taken by power boat through Indian Key Pass, they are dropped off at Picnic Key and kayak to the beach on Tiger Key for a lunch of peanut-butter-and-banana sandwiches. Pairs of ospreys are building their sprawling nests in the trees south of the beach. One osprey, after catching a fish, circles higher and higher above the nests, the ascent agonizingly slow, before descending in a series of stoops to its nest. Perhaps a mating ritual? A reddish egret, purplish-red neck contrasting with blue-gray body, does its distinctive hunting dance in the gentle surf off the beach, prancing and jumping and flaring its wings, all in preparation for spearing a fish. Shafts of sunlight stab through the purple clouds over the Gulf, and a brief rainstorm sweeps through as the group kayaks to Camp Lulu Key, where a fleet of five frigatebirds flies far overhead, their spectral shapes silhouetted against the high clouds, and a peregrine falcon zips past on a mission. The group returns to Picnic Key at 3:45 pm, to await their 4:00 pm pickup for the boat ride back to the mainland through West Pass.

*Tuesday, 2012 January 3:* It's a cold, windy, but sunny south Florida day, with breath steaming and patches of ice on the dock where the four of us gather at 8:00 am for the short ride from Pleasure Island to the mainland for a day of birding. At Fakahatchee Strand Preserve State Park, we enter the cypress swamp along a long boardwalk. Suddenly Karen hollers that there's a big bird right next to us. A red-shouldered hawk sits on a branch about fifteen feet off the boardwalk and ten feet above the swamp, clearly angling for a morning snack. Eventually it swoops to the swamp floor, snatches a frog, and returns to a different branch to dismember and devour it. Though we get a

very good look at the whole process through our binoculars, there remains a dispute as to whether the victim is a frog or a crab. Eleanor's initial idea, eventually abandoned by all, is a baby bird. Carl suggests a crab, a possibility Eleanor adopts, but Jeremy and Carl both end up supporting Jeremy's suggestion of a frog. Positions harden as the day goes on.

In mid-afternoon, we stroll along the extensive boardwalk that winds through a variety of habitats at Corkscrew Swamp Sanctuary, a beautifully maintained 14,000-acre area of wilderness east of Fort Myers, the crown jewel of the National Audubon Society's national sanctuary system (in his new capacity as a member of the board of Audubon New Mexico, Carl is especially pleased to see what the Society has done). As we pass through a bald-cypress forest at Lettuce Lake, several species of warblers, including the northern parula, make an appearance. The day of birding is crowned by a male painted bunting, extravagantly colored in blue, red, and yellow-green, hopping around the feeder outside the visitors center.

Back on Pleasure Island, everybody enjoys an outstanding dinner of pasta, steamed vegetables, and local stone crabs, each of which sacrificed just one claw to our voracity, living to provide more claws later on.

*Friday, 2012 January 6:* The Florida vacation over, Eleanor flew to London yesterday (first class courtesy of Carl's Continental miles), Jeremy to Houston, for a weekend stop on his way back to Palo Alto, and Karen and Carl to Albuquerque. This morning at 11:00 am, the roof-top photovoltaics hit 20,000 kW-hrs since production began in October of 2007.

*Monday, 2012 January 16:* As the rest of the US celebrates Martin Luther King, Jr., Day, Jeremy hits the quarter-century mark.

*Thursday, 2012 January 20:* In California for a NASA conference on quantum technologies, Carl joins Jeremy and members of the nascent Stanford Birdwatching Club, which Jeremy is organizing, for some early-morning birding at the Palo Alto Baylands. Before the birding, the group stops at Philz Coffee near campus to experience the famous single-cup brewing technique. Jeremy claims this is the best coffee he has ever had, and Carl, who has read about this technique in *The New Yorker*, where he learns nearly everything he knows, is inclined to agree after one cup of Jacob's Wonderbar. Despite cold, wind, and rain, the birding at the Baylands is great, with sightings of peregrine falcons, golden-crowned sparrows, Clark's grebes, American avocets, black-necked stilts, ruddy ducks, and a single glaucous-winged gull.

*Saturday, 2012 February 4:* Karen snowshoes on the east side of the Sandias with Janet Gaines and Paula Kahn, and Carl hits 10,000 miles of bike riding since 2008 April 1 as he passes through the intersection of Comanche with Louisiana.

*Sunday, 2012 February 5:* Winter in England! Eleanor went to sleep last night after a snowball fight that took advantage of an unusual two inches of snow in Cambridge. This morning she awakens to something more unusual, nearly a foot of snow, which shuts down Cambridge and much of southern England. She and friends—the Germans are blasé, the South Africans wildly excited—build a twelve-foot snowman on the grounds of Downing College, ignoring the usual prohibition against walking on the college lawns.

Best Wishes,

Eleanor

Jeremy

Karen

Carl

CMC/TEX

P.S. The photos of Jeremy show him in Israel's Negev Desert at the Makhtesh (literally, "crater," though it's not a crater at all, but rather a crater-shaped erosional feature), overlooking the hoodoos at Chiricahua National Monument in southern Arizona, and perched atop Sheepshead Peak in the Sangres, with Truchas looming behind. The landscape changes some, but Jeremy changes not at all as he goes from one side of the world to the other. Eleanor appears doing research in the Marianas, on the flanks of Mount Lemmon behind Tucson, in the uncharacteristic pose of Teddy Roosevelt, though she is thinner and certainly more attractive, and in the winter wonderland behind King's College with South African friend Stuart Scott. Karen is waiting in the rain, along with Jeremy, for the 2011 Pomona College commencement to begin, and Carl is celebrating his 60th birthday in the company of a Harris's hawk.