CHAPTER FOUR - LEARNING FROM THE LAND

Introduction. This section is about physical journeys and learning experiences informing both my work and evolving philosophy. While vernacular cultures met along the way enriched my experiences, this chapter is about the lands they shaped and that shaped them. Some stories relate to travel for its own sake, and some describe journeys sponsored by zoos or botanical gardens for the purpose of producing better animal and plant habitats and more accurate, inspiring, and informative visitor displays. The map below summarizes my travel locations. While this map may be referred to for project sites covered in other chapters, the stories to follow occurred outside of North America.

Figure 7. Upper: map of my global work and travel. Brown squares show where I have lived, green circles where I have done projects, and blue circles show places I have visited. Lower. map of Susan and my

travels in South America. Yellow solid lines indicate land travel; yellow dashed lines air travel and light orange lines show Peace Corps Volunteer travel in the interior of Bahia (Chapter Five).

South American Tour (1968)

After graduation from Harvard, my wife Susan and I joined the US Peace Corps Volunteer service in Brazil as a peaceful and positive alternative to military service in Vietnam (see Chapter Eight). As we completed our two years as Peace Corps Volunteers in Bahia, Brazil, Susan planed our further South America travels using the book “South America on $5 a day.” We had Peace Corps funds for our flights home and USD$2000.00 each as our readjustment allowances. In addition, we had my Jakob Weidemann Traveling Fellowship for Young Artists from Harvard. This could provide about seven months of frugal travel. We wanted to visit national parks and wild areas, along with prehistoric and historic sites and minimize time in large cities, which would save money. By visiting Peace Corps offices in each area we could find low-cost accommodations, sometimes listed as “suitable for Peace Corps”, the lowest rank given in back-packer travel guides of the time.

Amazon uncertainty. This was well before the days of internet connectivity. Mail was slow and uncertain and long-distance phone service unreliable. Travel and hotel reservation were made in person upon arrival. Uncertainty was normal. We had hoped to take passage on a freighter up the Amazon River from Belém to Iquitos in Peru, but when we flew to Belém we found the ship’s schedule had changed. After touring the city and the excellent Goeldi Natural History Museum we flew on to Manaus in the centre of the Amazonian rainforest. After a one-day look around, we boarded a flight to Bogotá Columbia. Our plane circled over the “joining of the waters”, where the black Rio Negro joined the muddy Solimões River to form the Amazon River. But rather than providing a tourist view, the pilot was dumping our fuel. We soon returned to Manaus. We were told to return to the airport the next day, and this occurred each day for five days, so we could not book river cruises or get out of the city. Finally, we made the flight to Bogotá.

Columbia. Bogotá is high elevation (2,600m, 8500’), temperate, and somewhat European. We enjoyed American style coffee, fried eggs, toast, and jam for breakfast on cool mornings for the first time in years. Colombia had the reputation as a country of thieves, but for tourists the threat was from pickpockets (we were prepared and survived a purse slashing) or even armed robbery, but that would be conducted politely. Personal danger was rare, unlike today’s drug cartel killings and kidnappings, which have decreased in the last few years.

Fresh from Brazil, I gave a lecture at the local university architecture department using my best high school (Mexican dialect) Spanish language skills. When I later ask if I had been understood, the faculty told me they had understood my Portuguese perfectly! Later traveling from country to country in Spanish speaking regions, every time we crossed a boarder, the new Spanish dialect seemed difficult. I was able to adapt as we traveled but a month later, crossing another border, the next dialect was difficult. The

difference in pronunciation between the Columbian Spanish dialect (the easiest for me) and the Argentine dialect was huge to my ear.

We made a short trip to Panama City, Panama to buy duty-free camera gear and flew back to historic Cartagena on the Caribbean, traveled by train along the coast to Barranquilla and another train south up the rich agricultural Magdalena River Valley to Honda in a steep mountain valley. The last three hours I made standing up because a mix-up caused us to disembark, then reenter the same train with seats fully occupied. After an overnight and brief tour of Honda, we continued our travel back to Bogotá.

Next, we hired a taxi (driver recommended by the local Peace Corps office) to drive us to the historic village of Villa de Leyva. The following morning, we awoke to the sound of gunshots outside our window and a cowboy shouting with a Texas accent! An American film company was shooting a western movie, and the actors were practicing nearby. The driver was a good guide and purchased food and other items for us at local prices. We took another side trip to Manizales to see its traditional bamboo architecture but were disappointed to find the bamboo structures and woven matting walls were covered with plaster and paint.

Heading south from Bogotá we traveled by bus or “collectivo,” a private taxi for as many passengers as can be fit in and shared the cost, unless they were the driver’s friends or relatives. Drivers drove like maniacs on steep twisting mountain roads; very unsettling. We drove though Cali and on to Popayán, where we visited a lovely native market, then crossed into Ecuador at Ipiales. We were traveling by local bus and were the only foreigners abroad, we sat near the back so we could not witness reckless driving. As our bus approached the border station some of the Indian passengers, mostly young men, came back and handed me their cartons of cigarettes with a grateful smile and returned to their seats. My lap was soon filled with cigarette packages as the border guards inspected the bus, glanced at us, and left. After crossing the border, the Indians gratefully reclaimed their duty-free cigarettes.

Ecuador. We continued south by bus on the Pan American Highway. After a long drive through moist mountain landscapes, we descended unexpected into the arid Chota River valley and stopped at an African village. We were surrounded by a village of round mud buildings with thatch roofs. Our guidebook explained escaped African slaves sheltered in this inhospitable landscape and built villages as they had in their homeland, and these persist to this day. Food was provided at these stops by local women and boys selling edibles up through bus windows. ‘Safe’ food for tourists included anything you could peel, and shelled or boiled items such as hardboiled eggs, boiled potatoes, oranges, and bananas. For water we carried our own canteens which we filled every night, adding an iodine tablet. The water tasted terrible but was safe in the morning. After a while we no longer noticed the iodine taste.

It was a long ride to Otavalo, where we enjoyed a wonderful fair specializing in cloths of amazing colors. “Unbreakable” locally made cloth products made excellent souvenirs for

backpackers, especially items we could wear. From Otavalo we continued to Quito, Ecuador's capital, high in the Andean foothills at an altitude of 2,850m (9,350'). After touring the vast central square, visiting the bank and resting, we continued south to the port city of Guayaquil. We planned to visit the Galapagos Islands, but in the days before mass tourism access was by booking on a monthly freighter or going by air, also on a monthly schedule midway between freighter voyages. The next ship would not depart for two weeks. If we took it and stayed on the islands for two weeks, we did not know how to get between islands, and we would use up three weeks of our travel time. We did not see anything fun to do around Guayaquil for fourteen days, so we decided to travel onward.

Chile. We flew over Peru (we would visit there later) and northern Chile's vast Atacama Desert to Santiago, the capital. Located in a valley between the cost range and towering snow-capped Andes, Santiago reminded me of the Los Angeles area, although far less developed. At least it was in 1968. The two cities are at about the same latitude with similar climates. Santiago also suffers from devastating earthquakes. I felt at home.

Our first side trip was on one of the world's steepest highways to the crest of the Andes to Portillo 2,880 m (9,450 ft) above sea level. Near the summit we had clear views of Cerro Aconcagua 6,960.8 m (22,837 ft) the highest mountain in the Americas. In Portillo there was one hotel and a border crossing into Argentina. After a long winding decent we reached the beautiful town of Mendonza. The climate was dryer, but the terraced landscape was dissected by clear streams and poplar-lined irrigation channels with frequent orchards. I was immediately reminded of my birthplace, Logan Utah. Today Mendoza is the capital of Argentina's wine country. This is not surprising since after WWII Germans, Austrians and Italians immigrated to Argentina with their wine culture. During our return to Santiago, we enjoyed a more modern coach compared to the ancient busses in Ecuador but were frustrated by not being able to stop for photographs.

From Santiago we took a pleasant (but delayed by a workers' strike) train ride down the fertile central valley to Temuco. Spanish invaders, conquering local Indian nations, were stopped at Temuco by the Araucani Indians. As a result, the local First People have considerable autonomy, a case parallel to the dynamic political balance achieved by the undefeated Māori in New Zealand. We purchased an example of Temuco weaving which we still display in our home.

Lake District. We continued south through the beautiful Chilean Lake District surrounding Puerto Montt in Chile and linking to San Carlos de Bariloche and Parque Nacional Nahuel Huapi in Argentina. At 45 degrees south, like the north latitude of Portland Oregon, the landscape more resembles that of Seattle, with beautiful rivers, lakes, and sounds; then and now a tourist heaven. This is the austral temperate forest zone represented by both evergreen (northernly) and deciduous (southernly) "southern beech", *Nothofagus*. Many similar species are found in Chile, Argentina, Tasmania and

Victoria in Australia, New Zealand, New Guinea, and New Caledonia, remnants of a time these areas were joined in the ancient super-continent of Pangea

Sea & archipelago voyage. We wanted to book passage on a freighter through the Chilean archipelago south all the way to Punta Arenas, but booking had to be made in person on the first day of 1969. We had two days to fill, and took a local ferry to Chloé Island, just south of Puerto Montt. Castro was a quiet rural town with a corrugated iron church. We never suspected that four years later we would purchase property on smaller Bainbridge Island taking the ferries across to Seattle in a similar climate and landscape.

We returned to Puerto Montt, got up early and waited in front of the freighter office at 6 am to be first in line to book passage when they opened at 8am. Luckily a passenger with advanced booking had cancelled and we secured the only cabin available. This freighter only had two “first-class” passenger cabins; very basic. The other cabin was occupied by a priest visiting fishing villages along the way. “Second-class” male and female wards were shared by up to seven, and “third-class” allowed passengers to sleep in the cargo hold on sacks of potatoes. This was used by Indian sheep shearers and other migrant laborers going south. A Peace Corps couple from Lima, Peru booked accommodation in the wards. We met them at breakfast the first morning after their sleepless nights in cabins filled with smokers. We took pity on them, and they slept in sleeping bags and pads on our floor for the remainder of the trip.

The ship passed smoothly through narrow fjords with snow covered ridges lost in the constant low overcast created by moist sea air passing over the permanent ice fields. We had entered the coastal temperate rainforest. Although the vegetation was different the landscape resembled the SE Alaskan archipelago we would visit decades later. After days in protected waters, we were required to turn west into the roaring 40’s of the open Pacific, passing around the Peninsula de Paytao. I prepared myself by skipping dinner and going out on the heaving deck at first light while everyone stayed in bed seasick. The leaden waves towered above us in perpetual gale. Cold salt spray stung my cheeks while albatross skimmed their long-pointed wingtips through whitecaps. I realized appalling weather for me was a lovely day for the albatross, which perhaps would find a calm sunny day appalling. I eventually retreated into the ships swaying mess for breakfast, joining the captain and priest. No other passengers came.

The next day or so we docked in a small fishing village where the priest disembarked. Native fishermen, perhaps the last of the Indigenous Fuegians, arrived in rowboats to sell fresh oysters and smoked clams. They were dressed in warm wool sweaters and trousers, but barefoot in the cold water collecting in the bottom of their boats. The sun came out for the first time as we ate oysters fresh from the sea and drank excellent Chilean wine on the ship’s stern. The water was so clear we could see the oyster shells we threw back shining all the way to the harbor bottom. This is one of the strongest memories of this entire voyage.

Figure 8. Photos of local indigenous people who sold us excellent fresh oysters and smoked clams.

After another day or two's voyages we entered the Straights of Magellan steering east. To starboard was Tierra del Fuego. Soon the landscape became dramatically dryer and more open and the sun came out as we passed into the Andean rain shadow. Turning north we arrived at the small city of Punta Aranas, the most southerly city in the world at a latitude of 53° S. The town of Ushuaia, capital of Teirra del Fuego, is even further south. In Punta Arenas we tried to book passage in a boat across the Strait to Teirra del Fuego, but storm forecast prevented the crossing.

We shared a taxi north to Puerto Natales with an Israeli couple. The town is nearly surrounded by fjords and bays. As we walked along the shore admiring distant black necked swans a car pulled up ahead of us and fired pistol shots out the car window at the distant birds. He missed and we understood why the swans were far from shore.

Figure 9. Torres del Paine is one of the most majestic national parks I have ever visited. The persistent, cold, roaring-forties winds and bright atmosphere contribute to the memorable experience.

Torres del Paine. The next day we hired a driver to take us north to Torres del Paine National Park. It is among the most dramatically beautiful landscapes in the world. We were driven up a dirt track and dropped at a small shed, our accommodation without furniture or heat. It was already half-filled with supplies for a Japanese mountaineering group already challenging their skill against the mountain towers. We hiked around

open country, seeing distant guanacos and condors, enjoying fresh calafate berries (*Berberis microphylla*) and leaning into fierce chilling winds. We recently purchased local heavy wool sweaters. These were almost sufficient, but burs caught in the hand-spun wool were uncomfortable. Walking back from the turquoise lakes bordering the magnificent two-toned peaks, we were overtaken by rain from a nearly cloudless sky, blown horizontally by the driving wind. Chilling wind and clear light are memorable qualities of roaring 40's landscapes. Today there is a highway through the national park with at least a dozen hotels.

Argentina. It was now January 15, 1969. Returning to Puerto Natales, Chile, we took a local bus east across the border to the coal mining town of El Turbio, Argentina. We were the only foreigners on the bus filled with local miners going to work. After a while, a bottle of local homemade distilled spirits passed around. Not wanting to be unfriendly, I also took a sip. The bus unloaded us at the coal mine and no farther. We entered the coal company bar and arranged overnight accommodation. Asking the bartender how we could get to Rio Gallegos, about 300km further east, he suggested there may be someone staying at the mine heading that way. After dinner we were introduced to two traveling sales representatives leaving early the next morning who invited us to travel with them in their spacious pickup trucks. The following day we crossed austral prairies dotted with pothole lakes with abundant waterfowl. Midway we stopped and our hosts invited us to lunch. One of them hung a half a butchered lamb on a steel spit over a fire and went off to fish. Later we enjoyed an authentic Argentine bar-b-que. By the day's end we reached Rio Gallegos on the south Atlantic coast. That night I became extremely sick. The alcohol I drank on the mimer's bus was not enough to kill an intestinal bug I picked up then which made me unpleasantly sick for two days. I don't have pleasant memories of Rio Gallegos.

While there is much worth seeing along the southern Argentine coast, our main interest was visiting the Argentine Andean national parks. Decades earlier President Juan Perón had decreed a great highway be built along the east slopes of the Andes. This road was never built, but not wanting to disappoint the president, it was shown on maps. In 1968 the only way to reach the Patagonian mountain national parks was by sig-sagging between coast and mountains. Buses alternated with Argentine Airforce DC-3s between major destinations. We used both. Bus rides were long and basic, but we could see the passing country. DC-3 flights were shorter, but turbulence and indifferent or nonexistent cabin service left a poor memory of the flights.

Perito Moreno Glacier. From coastal Rio Gallegos we traveled northwest to El Calafate on Lago Argentina and the entry to Los Glaciares National Park. The glaciers originate in the vast Andean icefields between here and the Chilean archipelago through which we had sailed. We passed along Lago Argentina's north shore to a smaller lake with a low water line, reaching a point where the Perito Moreno Glacier emptied into a small lake. A dam of glacial ice, Brazo Rico, blocked the connection to the larger drier lake below. About every five years the smaller lake, fills with ice bergs and melt water from

the glacier, rises to a level overtopping the glacial dam, quickly cutting through the ice and emptying Brazo Rico into the lower lake and on to Lago Argentina. We camped on a forested slope overlooking the 30m (100') high glacier as icebergs calved and crashed into the lake with echoing thunder.

From Lago Argentina we again crossed the country west to east to the coastal town of Comodoro Rivadavia. The next day we crossed again east to west to reach the coal mining town of Esquel in the Andean foothills still further north.

Esquel and Los Alerces National Park. We arrived in the Welsh town of Esquel. Welsh people first came to Patagonia in 1865, migrating to protect their native language and culture threatened by the English in their native Wales. While on a bus ride in the area I met a Welsh scholar from the UK there to document this preserved dialect, now extinct in Wales. He told me remote farmers he visited spoke archaic Welch and the local native Indian language but had not bothered to learn Spanish, the Argentine national language. They preserved their ancient world and still worked the local coal mines.

We were now in the region of more popular and developed national parks. There were more tourists and comfortable coaches to travel on. It was easy to reach Los Alerces National Park, but we wanted to visit the ancient alerces trees. Remnant groves were well into the park interior. Alerce ("larch" in Spanish) is *Fitzroya cupressoides*, an ancient form of cypress. Fossilized examples have been found in New Zealand, home to many ancient Gondwanaland tree species. *Fitzroya* may have been one of the oldest and largest trees in the world. Ancient specimens have grown to more than 70m (230'), 5m (16') in trunk diameter. One magnificent tree was estimated to be 3622 years old, older than the most ancient redwood in California. A less common, but beautiful small tree found here is the Chilean myrtle, (*Luma apiculata*), said in our guidebook to be the inspiration for the trees in Disney's early movie Bambi.

Our coach carried us through light-leaved forests of southern beech, (*Nothofagus*), another Gondwanaland relic, to Lago Futalaufquen. There we boarded a boat traveling the length of this glacial lake and up a fast-flowing river to small Lago Verde where passengers stayed at a local resort. We took a second coach for a short ride to Lago Menéndez, another long boat ride to our destination, the alerces grove now called Alerzal Milenario (Millennium Larch Grove). This grove was small and surrounded by southern beech, blocking full views of the magnificent *Fitzroya*, making it impossible to appreciate or photograph their full size. These were tightly pyramidal, branching to the ground with dense foliage, reminding me strongly of mid-aged Sierra redwood (*Sequoiadendron*). Years later I read that the tallest and oldest Fitzroyas (not this grove) had been cut down by illegal loggers.

Near the end of January 1969, after our return boat ride, we camped for four days beside the broad, fast river near Lago Verde. I remember this as the most relaxing and beautiful camp I have ever enjoyed. I am not an angler, but before leaving Esquel I purchased fishing line and hook, but not a fishing rod or reel. Walking beside the rapid

river the large horse flies were annoying. If they are annoying me they may be tempting the trout in the river. I swatted one, put it on my hook, threw it where the current would sweep it over deep river depressions. I did this four times and retrieved three pan-sized, pink-fleshed rainbow trout for breakfast.

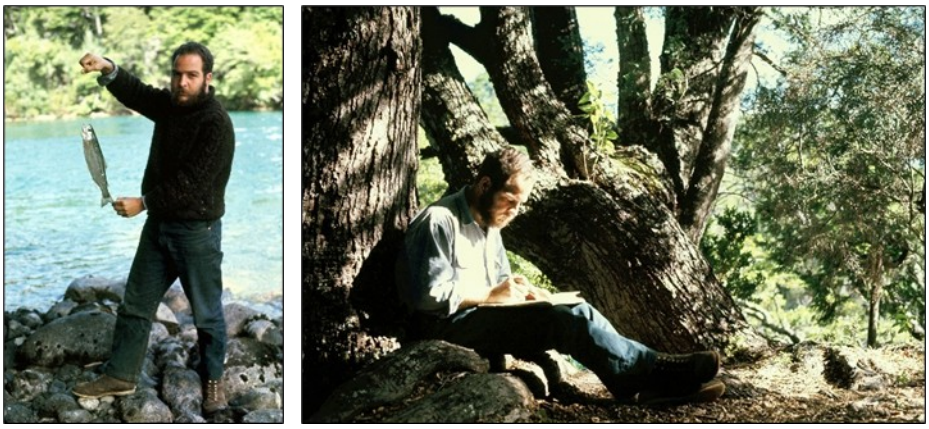

Figure 10. Left: one of three rainbow trout caught in four casts of my handline. Right: catching up on my travel journal.

Parque Nacional Nahuel Huap, Argentine Lake District. We returned to Esquel and continued north in a comfortable tourist coach to San Carlos de Bariloche, capital of the Argentine Lake district with developed tourist loops connecting back to Puerto Mott, where we began our Patagonian adventure. This is an exceptionally beautiful area, but even then seemed overcrowded with tourists after our experiences in the Patagonian far south.

Figure 11. Notable Chilian and Argentine Lake District vegetation. Left: Chilean myrtle (*Luma apiculata*), centre: southern beech, (*Nothofagus*), right: monkey puzzle tree (*Araucaria araucana*).

San Martin de los Andes. Traveling north, we reached San Martin de los Andes February first. We had come to see the “monkey puzzle tree” (*Araucaria*) groves native to this drier zone in the southern temperate forest. This is another ancient genus, once browsed by dinosaurs and widely distributed including nearby Chile, and southern Brazil but also in Australia, Norfolk Island, New Caledonia, and New Guinea. It has soft pine-

like wood I used to build our furniture when we lived in Bahia. The largest *Araucaria* trees we saw were on a hillside grove. They were about five hundred years old. The name relates to the Araucanian Indians we visited in Temuco in southern Chile.

From San Martin we again crossed into Chile to Lago Pirehucio in the Chilean Lake District, then traveled north through Lanco and Temuco, returning south to Puerto Mott and completing our memorable circuit of Patagonia. What a beautiful area of the world! We then headed east again, crossing into Argentina.

Buenos Aries. We traveled on good highways on a comfortable coach to the capitol city of Buenos Aries, a trip of about 18 hours. By now we needed cash withdrawal, clean clothing, a more varied diet, and rest. We were kindly hosted by two American women living in BA we had met on our travels. They graciously showed us around the city. One memory emerges these many years later, a visit to an outdoor performance in Spanish of Shakespeare's "Midsummer Night's Dream". It was performed in a famous local Amphitheatre built in a gap between buildings in a rundown but artistic district. I really enjoyed this mix of big city art and culture after our months of primitive travel. BA, as it is known, was expensive compared to our remote travels, but this Argentine urbanity was a welcome break, and we stayed for six days. We had completed our first five months of travel.

Uruguay. Traveling north again by buss we stayed the night in Posadas, Uruguay. I stopped to buy a fine suede sports jacket at a low price, a beautiful garment which turned out to be slightly too small for comfort later.

Iguazú Falls. These magnificent cascades are located at the boarder of Argentina, Paraguay, and Brazil and comprise the largest waterfall system in the world. There were few safety precautions during the time of our visit. We could walk to the very brink of thundering falls and cross rushing tributaries meters from the drop on narrow slabs without handrails. We had now reached the tropics and butterfly flocks were remarkable.

Return to Brazil. We traveled on to the southern Brazilian city of Curitiba. I was now speaking Portuguese once more and a cab driver commented he understood my Spanish perfectly. To this day I speak a mixture of Spanish and Portuguese languages. I can cast the accent one way or another, but verb forms and vocabulary come out mixed. We then took a bus to Rio de Janeiro Spending five days visiting friends, shipping souvenirs home, and recovering. The next day we took the long and familiar overnight bus back to Salvador Bahia, completing our South American travel loop. We stayed four days arranging our eventual flight home and tourist visas for ongoing travel. From Salvador we took the bus to the modern city of Belo Horizonte and on to the historic colonial town of Ouro Preto, which we had visited briefly during our Peace Corps in-country training over two years before. This Sixteenth Century hill town was still a wonder, but also a major tourist hub. We traveled on to the town of Diamontina, which was wonderful, but not over-visited. Both towns are noted for the unique sculpture

of Aleijadinho (Antônio Francisco Lisboa c.1738 –1814) who continued to create masterful religious sculptures with his chisel strapped to his hand after leprosy had damaged it, or so his legend is repeated. We also visited the historic town of Congonhas, where his remarkable work is also found. Aleijadinho cleverly placed his life-sized statues of biblical prophets at turning points on the Baroque stairs the church. As one moved past them climbing the stairs, your motion seemed to animate the statues as if it were they that were moving relative to each other. This is one of the most memorable sculptural experiences I have witnessed. On 23 March we traveled by bus back to Rio de Janeiro for two days before flying to São Paulo and on to Cochabamba, Bolivia.

Bolivia. Cochabamba, at 2,570 m elevation (8,432') was a small city set in the forested foothills of the vast Amazon basin in eastern Bolivia. We then took a long, slow, ascending bus ride up to the Sucre, the colonial Bolivian capitol (2800m, 9000'). During our touring of Ecuador and on Bolivian and Peruvian altiplano we traveled on peasant buses, old even then. Modern readers would not recognize these small, cramped vehicles. There were no built-in toilets. Every few hours the driver would pull over on some remote mountain road. Women would gather near the front left bus bumper to pee while men used the right rear bumper. Men and women took their living livestock to market on these buses. Goats would be bound and carried on the bus roof. Live chickens and guinea pigs were carried by women inside the bus. With our backpack between our legs and other passengers' baggage stacked around us, hours would pass before we could see our own feet again. Once I found an escaped guinea pig scurrying under the seats between my feet, soon followed by a little girl, also scurrying back under the seats in scrambling pursuit.

In Sucre, I remember having breakfast in the colonial era market. At this altitude mornings were cold, but we warmed ourselves drinking what we called "hot purple." This was a satisfying warm drink of spiced liquid purple corn starch. We knew it was safe to drink because it had been boiling and it was very filling, along with a local pastry. The next day we took an ancient bus mounted on narrow cage railway tracks to the traditional Palm Sunday market in the remote village of Trabucu. We accompanied a Peace Corps Volunteer we had met who spoke the Quechua language. Listening to the Quechua conversations around us among the colorfully dressed locals, he could hear that we were the subjects of most in-transit conversations. We were the only foreigners at this colorful market and purchased small local crafts as souvenirs. Afterwards, easily fatigued by the high altitude, we rested by a small fountain in a local park. Susan was always careful with her purse but for some reason left it on the bench when we departed. We had gotten about 50m when we heard a local Quechua Indian fellow running after us yelling: 'Senora! Senora, su bolsa, su bolsa!' 'Lady! Lady, your purse, your purse!' and returned it to Susan, refusing any reward. He was simply showing his hospitality to guests in his village.

On 2 April we took a local bus from Sucre even higher to the old silver mining town of Potosi. At over 4000m (13,500') It is one of the highest towns in the world, and the highest elevation we experienced. We stayed overnight and took the early morning bus to La Paz.

La Paz, the modern Bolivian capitol has an altitude of 3600m (13,250') yet is in a round valley surrounded by an even higher plateau. We visited for four days. We met a Peace Corps doctor in La Pas who has a runner and ran from the valley floor to the ridge three hundred meters higher every morning. Seems humanly impossible. By traveling by road up from the amazon foothills over five days our bodies were adapting to this high elevation far better than if we had simply flown to La Paz by airline.

La Paz is a wonder of historic architecture, but was, at the time, politically insecure. The President of the Republic was driving through the city and his security guards insured that every window, including our hotel window, was closed before he passed. We stayed, as usual, in a cheap hotel without hot water, but 'suitable for Peace Corps' (and recommended by the local PC office). We were told that at the time only one hotel in the entire country, then called Hotel Grande in La Paz, offered hot showers. We couldn't afford to stay there but recklessly splurged and had breakfast there with fresh strawberries and cream.

We traveled on to Lake Titicaca, at 3812m (12,500') the highest large lake in the world. It is surrounded by high dry grasslands of the altiplano, far above timberline. We visited the floating reed villages of the Aymara people. The Aymara are thought to be the precursor of the Inca culture of Peru but retreated to their floating reed islands as a defense from later Inca attackers we were told. The Aymara language is distinct from the Inca and modern Peruvian native Quechua language. We also visited the 'Gateway of the Sun" a Tiahuanacan historic artifact near Lake Titicaca. This culture is thought to have been about 1800 years old.

Peru. We crossed into Peru along the shoreline of Lake Titicaca on 8 April. The next day we took an overnight train trip to Arequipa on the western slope of the Andes overlooking the distant Peruvian coastal desert blending farther south into the Atacama. Returning the next day we saw vast dry open country, remarkable in its simple grandeur. We continued by local bus through Puno to the Inca capital of Cusco (3400m, 11,150' altitude). Most tourists to Cusco find the altitude difficult but having acclimatized, we did fine. Inca stone architecture is made with perfectly fitted mortarless joints, sometimes with extremely large boulders at their astounding 15th Century fortification at Saqsaywaman, or with intricate polygons such as the 13-sided stone fitted into a foundation wall in Cusco we visited. Supremely skilled stone worker teams were having fun and showing off. In traditional Inca architecture, the heavy interlocking stone walls were topped with lightweight timber and reed thatch roofs. This was perfectly designed to survive frequent earthquakes. When shocked the stones could rub against each other, sliding back in place when the quake subsided. Later Spanish built large churches and civic building using European ridged mortar joints above pre-existing Inca

stone foundations. During subsequent earthquakes Spanish architecture crumbled. Inca foundation walls remained. Flexibility and resilience outlasts strength and rigidity.

Figure 12. Machu Picchu is the most dramatic ruin I have ever visited. Left: the 'Hitching post of the sun" formation remains after Inca stone cutters removed all the surrounding granite leaving a flat floor. Their sun was spiritually attached to the very foundations of their world. Centre: Huayna Picchu is the peak rising at the lower end of the settlement. It is a challenge to climb the steep narrow steps handing over the Urubamba River gorge far below. Right: well-earned view of Machu Picchu from Huayna Picchu.

On15 April we took the local train to the fabled ruins at Machu Picchu. This was the slow train with countless switchbacks downhill. The elevation of Machu Picchu is about 1000m (3300') lower than Cusco in the vast upper Amazonian watershed. We took this train because it was less expensive and arrived earlier than the more comfortable tourist train. We left the train at the station on the Rio Pacaymayo and decided to save further cash by walking up to the ruins rather than paying for the van…what a mistake! The driveway up to the ruins was steep and long with countless switchbacks. Burdened with our packs, we arrived breathless. Susan had booked lodging for us at the single hotel in those days. This was expensive by our standards: USD $60 in 1969. We stayed two nights. The tourists arrived at 10am and departed at 4pm, giving us glorious sunrises, mornings, late afternoons, and sunsets to explore the empty ruins by ourselves. The Inca architecture of Machu Picchu represented my ideal of perfectly blending site and structure. The granite mountain merges with granite architecture. The stonework and water systems are both enduringly functionally and astonishingly beautifully. 15th Century builders cut steps into the massive granite and then built additional granite steps to continue the stairway. They leveled the top of the highest granite nob, leaving a 2m high pylon, called the "hitching post of the sun" emerging from the original rock (Figure 12). The overall organization of buildings, water channels, and terraces is balanced along the narrow defensible ridge high above the river canyon. In this region of rapid geologic uplift resulting in steep slopes and frequent earthquakes, enduring landscapes, much less architecture are rare. Yet Machu Picchu remains faultless due to its resilient design and superb construction. This was one of the most memorable visits of the entire trip.

Lima. We flew from Cusco to Lima and stayed with the couple who had shared our small cabin on the voyage south through the Chilean archipelago. We stayed eight

days, but I do not recall much of that period other than being exhausted tourists. We didn't care to see another museum or ruin. We missed out on much Lima had to offer, but enjoyed catching up on contemporary culture, including the music of a new English group called the Beatles.

Return to the USA. On 27 April 1969 we flew from Lima to Mexico City and on to San Diego, USA, where Susan's family lived. We were in South America for about 30 months and travelled through nine countries. One of our goals was to travel for USD$5.00 a day, including land travel but not counting airline travel. Susan's meticulous travel and fiscal management made this possible. We traveled by horseback (to see one ruin), taxi, bus (ancient and modern), train (ancient and modern) and air (DC-3 and 707), riverboat and cargo freighter, mostly living from our backpacks.

Africa

First African Safari -1982. Mr. Hank Klien, then Education Director at Woodland Park Zoo and his wife were leading a safari to Tanzania open to zoo society members. Did I want to come? Of course, I did! At the time I was working with Jones & Jones in Seattle Washington specializing in zoo design work. J&J agreed to split safari cost in exchange for the photos and notes I took. They even provided the film. During a ten-hour stopover in London, and my first visit there, I took the tube downtown and navigated to find a unique bookstore where the Collins Guides including "A Field Guide to the Birds of East Africa" by J.G. Williams were sold. At the time these were the best wildlife fields guides for Africa, India and Southeast Asia.

After two sleepless overnight flights we arrived in Arusha, in the Tanzanian highlands, on 5 February 1982. We had been warned to beware of illegal money changers at airports and only to use banks and international agents like American Express. When we asked the airport customs official where we could change money, he happily did it for us at a fair rate. So much for following the rules. We visited Arusha National Park, Lake Natron (flamingos), Karien Gorge (vultures, then Maasai village), Soit Ayai kopje, Nduto Lake (vast herds of wildebeest, zebra, antelope, cheetah hunt), Ngorongoro Crater (lions around camp, bull elephants), Gibbs Farm on the crater rim (Swiss family, great coffee), Lake Manyara (abundant hippos). This was a wonderful but trying trip. Sengo Safaris, our host, had excellent African staff, but poor equipment. We had two or three flat tyres each day. One vehicle would only start if pushed, even when lions were nearby. The frequent stops gave me the opportunity to do many journal sketches and compose many sketch poems.

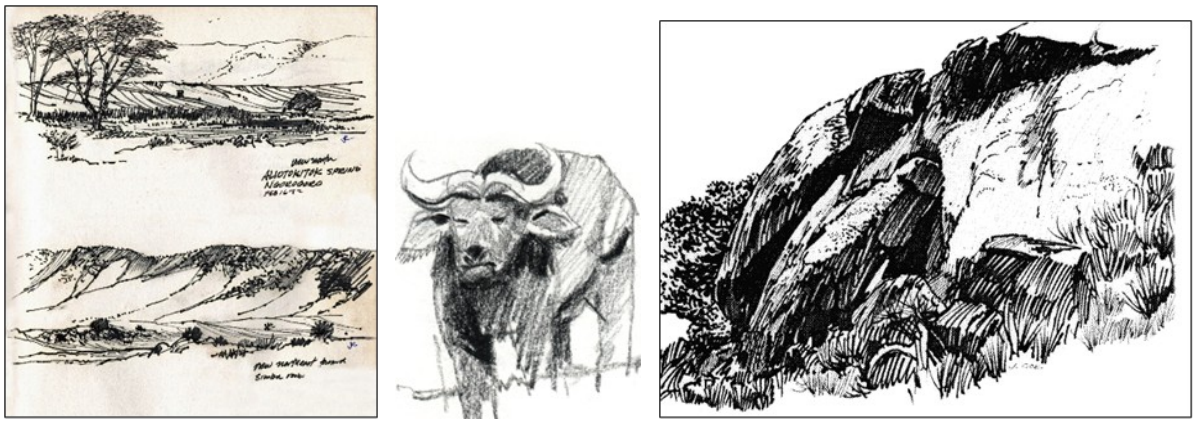

Figure 13. Left: my sketches near camp in Ngorongoro Crater. Centre: bull buffalo. Right: kopje at Soit Ayai.

A highlight of the trip was the wonderful friends I met. Several of us have stayed in contact, and recently six of us had a 42nd -year virtual reunion and group reminiscence. We recalled camping on the floor of the Ngorongoro Crater (no longer allowed), the wild buffalo snorting and farting outside our tents at night and the two male lions waiting at the campground gateway where several of the group had just done an early morning run.

Toronto Zoo & Safari -1990. My firm at the time, CLRdesign in Philadelphia, entered a competition to design an African Savanna exhibit for Toronto Zoo. We were selected for the work and requested to lead the Zoo's team on a safari to experience the real thing. Several staff members were bird lovers, so I selected East African Ornithological Safari's Inc. Mr. Steve Turner, the founder's son, with dual citizenship in Kenya and UK, agreed to lead the safari himself. His knowledge of the areas we visited, local geology, cultures, wildlife and especially birds was outstanding. The Toronto Zoo team was led by Dr. William Rapley, Head of Live Collections and later Zoo Director and included Tobi Styles, John Carnio, Vern Brinsmead, Paul Harpley, and Duncan Bourne. From 11 – 25 June we visited Tsavo East and West, Amboseli, Samburu and Massai Mara National Parks in Kenya, East Africa.

Figure 14. A Maasai Moran (warrior) and two Masai women supplement their incomes posing for tourists during my visit to Kenya with the Toronto Zoo team.

I found time to keep up my journal, sketches, and poetry and had a wonderfully informative experience myself. Here are a few examples.

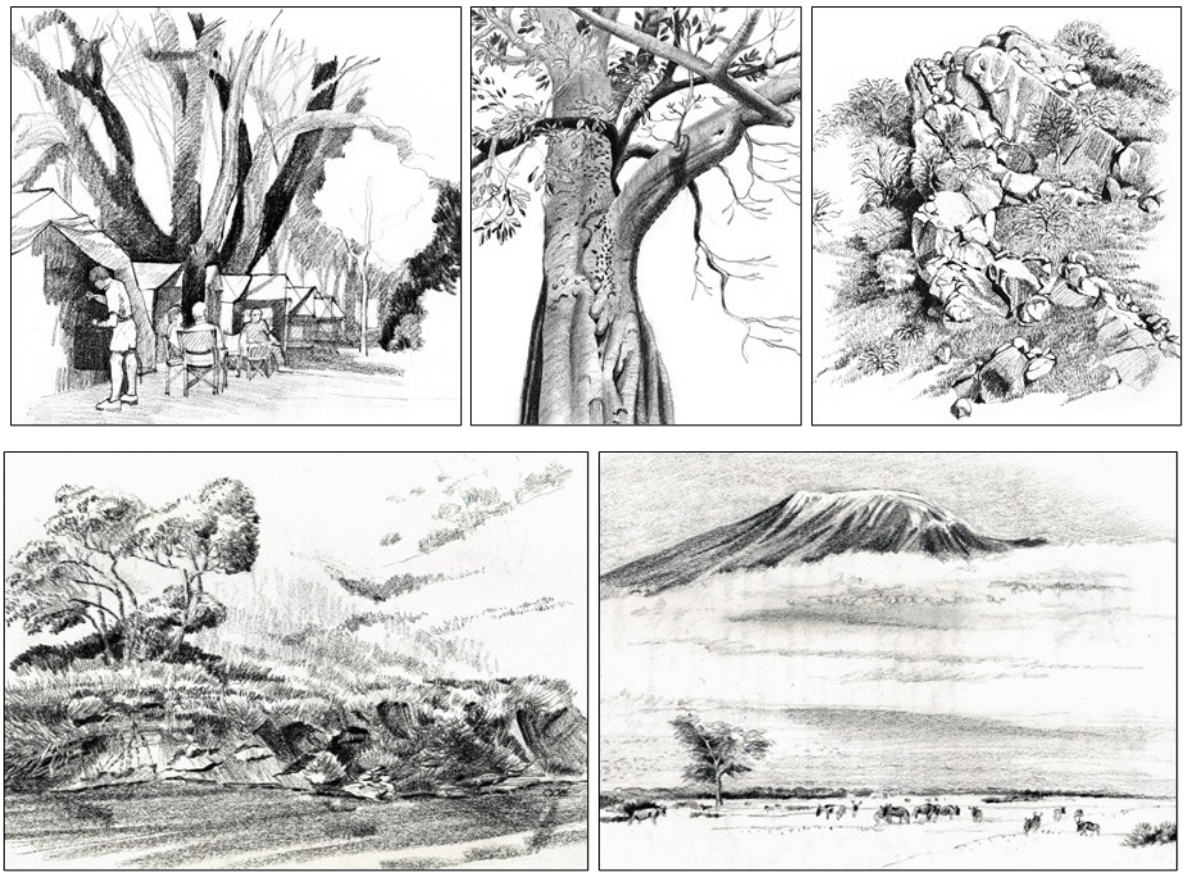

Figure 15. Sketches from the Toronto Zoo 1990 Kenya Safari I led. Top left: private camp under spreading acacia in Samburu. Duncan Bourne is shown in the foreground, and Bill Rapley is seated and facing me. Middle: baobab tree. Right: rocky ridge in Samburu National Park. Lower left: Mara River, right: Mt. Kilimanjaro from Amboseli National Park.

Ghana Kakum National Park – Master Plan sponsored American Society of Landscape Architects - 1994. The ASLA collaborated with Conservation International (CI) on a pro bono initiative to prepare a master plan for Kakum National Park in Ghana, West Africa. I was invited to join a group headed by Mr. Chuck Hutcheson of CI, which included Johnpaul Jones, my old colleague from Jones & Jones and a fine architect of Native American decent, Mr. Walter Hood, an African American landscape architect, artist and social activist, Mr. George Patton, a landscape architect and just retired head of the American National Park Service, and Ms. Susan Everett representing the ASLA.

We arrived in the capital, Accra, and the following day enjoyed the two-hour drive west to the town of Cape Coast, passing through beach communities with colorful and imaginative stores, business, and church signs. Cape Coast is a fishing town reminding me, almost transporting me, back to our Peace Corps Volunteer days living in Bahia,

Brazil (Chapter 8). Fante, the local dialect, sounded much like the African accent given to the Portuguese language in the Bahian markets where we shopped. Indeed, some of the African slaves transported to Brazil, and especially to the Caribbean, where imprisoned in Cape Castle, the Portuguese fort built here in 1482. We respectfully toured the fort, now an important historic site. We ducked under the low “Door of No Return” from which shackled slaves departed the prison and entered the slave ships. This was a somber and unforgettable experience.

Our work began with an inspirational presentation by Mr. Kwesi Agbey, Ghanan Director of Tourism. Cultural and eco-tourism have become important elements in the government’s strategic plans for the region. His talk was followed by a broad and deep introduction to local culture and demography by Dr. Henry Wellington, a German trained Ghanan architect and planner. We were also introduced to Ms. Emma Tacke the lead project architect. She had worked for a large firm in England, but her skills were not recognized so she returned to Ghana. Emma was one of several female professionals we had the pleasure to work with, and I was delighted to see the support given to their professional advancement by the senior Ghanian officials we met.

One highlight of the project was our formal introduction to the local Paramount Chief. He had deeded 55 ha (136 acres) of village land to the national park. This had been an oil palm plantation which became uncompetitive with vast new plantations in Southeast Asia and had been cleared. The plan was to locate park support facilities such as parking, admissions, and services on this disturbed site so that no damaging construction would be required inside the forest park itself. This donated village area would then be reforested. We entered the village residence of the Paramount Chief, a substantial white tropical colonial building with a large forecourt surrounded with folding chairs. Strict protocol instructions included forming a reception line moving in a counterclockwise direction. In this manner, when meeting the Chief and shaking hands, our right hand with palm open would be in his full view. This was a sign of security and respect. When we took our seats around his courtyard, we were to sit upright with both feet firmly on the floor. Slouching or leg crossing were considered rude and disrespectful. The Paramount Chief gave us a rather long and formal speech in the Fante language. His words were translated for us by a young female park ranger. This is noteworthy because in West African culture the ‘Chief’s Voice’ (translator) is a highly respected position. This is another example of leaders supporting opportunities for female staff in a traditionally male-dominated culture.

The Chief then leaned back comfortably himself and greeted us heartily in perfect American English. He told us the formal speech was a diplomatic necessity to his community. He graduated from West Chester College, not far from my office in Pennsylvania. Refreshments were then passed and we had a pleasant informal discussion about his project.

Kakum is the first national park (375 sq km or 145 square miles) created by local initiative rather than the national government in Ghana. Endangered species include

forest elephants, yellow-backed duiker, bongo antelopes Diana and other monkeys, 266 species of birds including African grey parrots and hornbills. During our long rainforest reconnaissance walks we surprised a forest elephant, who burst trumpeting onto our trail as our guides fled. Fortunately for us, the elephant also turned and fled in the opposite direction. Later we were shown a forest elephant nocturnal wallow where we suggested construction of an overnight treehouse platform. Someone, perhaps Conservation International, had suggested installation of an elevated canopy walkway suspended between large existing trees. These are attached to the trees in such a way as to cause no lasting injury to these forest giants. At that time, I believe one such construction existed in rainforests in Australia and one in South America. Our task was to determine the best location. After our reconnaissance hikes we located two gradual hills with a steep-sided valley between them the elevated walkway could span. Hikers could climb gradual forest trails to the height of the Canopy Walkway, suspended 30 meters (100') above the valley. When later constructed, it spanned 350m (1,150 feet) supported by seven great trees.

Figure 16. My 1994 sketch of the proposed tree-to-tree canopy walkway and Dennis Paulson's photo from the finished feature thirty years later.

I ran our workshops as we developed plans for the arrival area, visitor and support facilities and produced six colorful architectural illustrations, all approved by our clients. After returning home, I drafted our formal design report, which was combined with a park management report by Conservation International.

After leaving the Cape Coast tropics, the return flight to Newark Airport landed in a blizzard. The airport was closed. My flight to Philadelphia was cancelled. I was able to take a bus (the only passenger) to Newark train station and a late train to Trenton. A taxi drove me home to Newtown, Bucks County Pennsylvania through falling snow. My willing taxi driver was from the Caribbean and had never driven in snow, much less a blizzard, before. His old car slipped and slid but we had the roads to ourselves and arrived home safely. I urged him to stay the night with us rather than risking the return drive, but he only laughed and roared off into the white night.

Travels with Terry – 1986. I will discuss our design work with Dr Terry Maple for Zoo Atlanta in Chapter 7, but first I'll describe some of the research travels Terry arranged to support our design and marketing of their new exhibits. Terry was a Master of Marketing, an alpha male, self-described 'silverback' as we say, utterly convincing with his combination of confidence and intelligence. He convinced Mr. Bert Rudman, a producer for Atlanta area Channel WSB TV to film a "documentary" titled In Brightest Africa (title stolen from Carl Akeley's book) and other research trips to inspire the zoo's new exhibits. Surprisingly, Ford Motor Company was marketing their Taurus family car line in Atlanta and picked Zoo Atlanta, popular with young families, to support their corporate marketing budget. Thus, the resulting exhibit gorilla exhibit complex was named the Ford African Rainforest. Terry convinced his Ford Motor Company sponsor to underwrite the trip to study gorillas in Africa. I wrote "documentary" in quotes because the actual plans had already been prepared before these trips occurred. The "special" aired just before the new exhibits opened.

Figure 17. Left: with Kathy Day and Molly Bloomsmith visiting mountain gorillas in Rwanda. Right: photo with Terry Maple and Kathy Day in the Democratic Republic of Congo.

Interview with Mountain Gorillas. I missed out on the first trip on which zoo staff, joined by a popular WSB TV presenter Ms. Virginia Gunn visited Costa Rica. The second trip, and my first with Terry, was to East and Central Africa beginning 3 March 1986. Zoo staff included Director Terry Maple, Bird Curator John Fowler, who had previously worked under Dr. Dian Fosse saving the mountain gorillas before her 1985 murder, Dr. Molly Bloomsmith, Vet. Dr. Ken Gould, gorilla expert from the Yerkes Regional Primate Research Center, which would be supplying most of the gorillas to Zoo Atlanta, and Ms. Kathy and Mr. Brad Day, daughter, and son of doner Ms. Deen Day Smith. WSB TV producer Bert Rudman and videographer David Lyman joined us as the video production team. Terry had led the Day family on a previous African Safari resulting in the seed funding for our Zoo Atlanta Master Plan which was instrumental in gaining support for Zoo Atlanta's rebirth.

Kenya. Travel began with a flight by the Belgian airline to Brussels, where we toured the historic city plaza and enjoyed wonderful local beer. That night we flew on to Nairobi, Kenya. We began with a safari and hot air balloon flight in the Massai Mara

National Reserve. One imagines these great balloons silently floating over the great herds. In fact, the sound is deafening every time the pilot must burn a jet of pressured propane to heat the air in the balloon. The herd below us fled and elephants stomped and snorted, shaking their great heads each time this happened. Later that day the balloon pilot and his wife were our guides for a safari drive and demonstrated a notable lack of knowledge or empathy for the wildlife we viewed. It was breeding season and male antelope were defending display areas from other males while attracting females. Our guide was about to drive the midst of this active group when I told him to stop and go far around them. His thoughtless interruption may have cause a dominant prime male antelope is once-in-a-lifetime opportunity to pass on his magnificent genes.

We spent a night at the ARC Lodge in the Aberdare hills. Like the more famous Treetops Lodge in the same area, the ARK is located near an active waterhole which is floodlit. Guests could sign up to be awakened when notable species like elephants or rhinoceros come to the waterhole. I was so enthralled by the wildlife dramas I observed that I didn't bother to go to bed at all that night. The principal characters were a mature hyena pair and their ambitions but unskilled young adult pup versus a bull buffalo and later tracking five baby warthog piglets. Happily, for me, but not for the hyenas, all the piglets somehow survived for another day.

Rwanda. The highlights of this safari were our experiences of two days exploring Volcanos National Park in Rwanda and meeting two troops of mountain gorillas. According to gorilla encounter rules, only six tourists were allowed in a group. Since there were seven in our group, I was excluded the first day and, with a knowledgeable, local guide, studied and photographed the botanical communities in the mountain gorilla habitat. This high elevation landscape, between 2500m (8000') and 3500m (11500'), featured bamboo at lower elevations, dense herbaceous thickets including Galium (bedstraw), Urtica (nettles), scattered groups of Hagenia and Hypericum and large leaved, spreading Vernonia trees. The giant Lobelia zone is a higher area we didn't reach. The wet herbaceous alpine/temperate landscape is completely different than the tropical forest of lowland gorillas such as we would provide for in our Zoo Atlanta exhibits, although we noted many plant species which grow in Atlanta's temperate climate.

The second day we hiked through the cultivated fields of pyrethrum daises, which are grown to produce organic insecticides. At the park boundary, our guide introduced us to the encounter rules: 1) never approach or touch any of the gorillas. If a youngster wants to climb on you avoid it if possible. 2) If a silverback charges you, drop to the ground in a ball and whimper as a sign of submission. 3) Head height is a sign of dominance. Always keep your head lower than the guide's head. The guide will always keep his head lower than the silverback's head. The silverback will then know the guide has his group under control. The slopes of Mt Karisimbi were steep, the air cool and humid. We passed up through the bamboo zone (cloud forest indicator) to the last place group thirteen had been seen and found them after only about 45 minutes. Some tourists

never found their group and Terry's group the day before had hiked for hours in their search. The gorillas were low on a hillside above us as we stood in a small valley. Curious about the silverback's sense of status, I backed up slowly increasing my distance from him even further. Soon I was slowly backing up an adjoining hillside. As my head came to the head level of the now distant and seemingly inattentive silverback, he lowered an eyebrow, signaling the guide, who immediately turned and, frowning, signaled me to get to lower ground. To this day I'm amazed at the finely tuned communications the guides and gorillas share. In my 1985 paper "Design and Perception, making the zoo experience real" I had admonished readers and zoo designers to always locate zoo visitors below zoo animals for the welfare of the animals and to teach respect to zoo visitors. Now I have proof of the importance of keeping zoo visitors' heads below animal heads, especially for great apes. Troop thirteen moved up the slope to a level shelf and lay down for a midday nap. We were observing from the steep slope just below when we heard a grumbling sound. A female gorilla wanted to join her family, and we were in her way. At our guide's orders, we dropped flat to the sloping ground and held very still. Soon the female gorilla moved up over us. I recall her dark furry foot placed carefully next to my face as I hugged the ground.

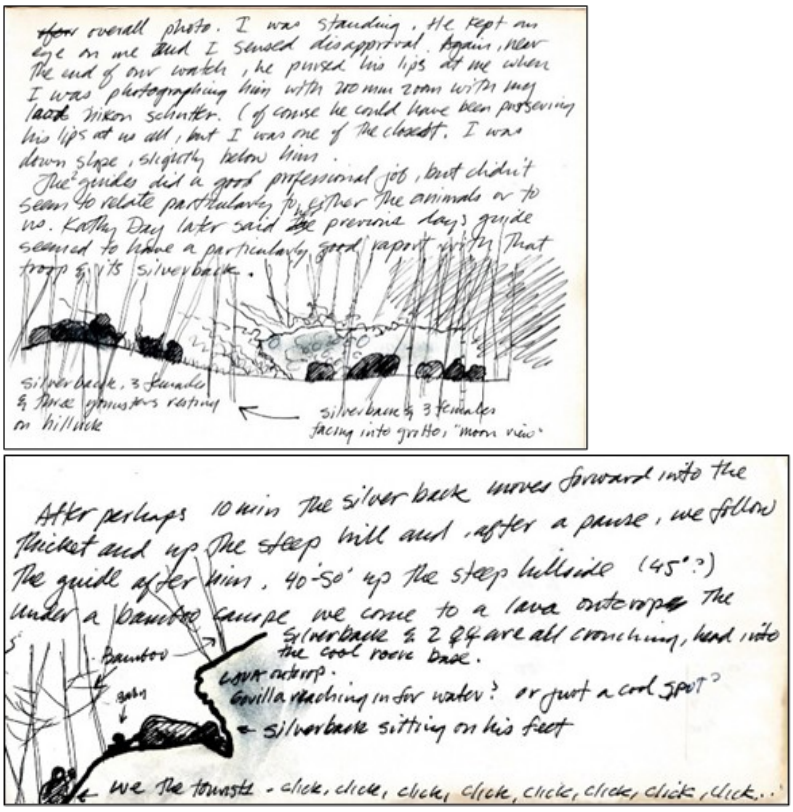

Figure 18. My 1986 field journal notes and sketches. Above: showing gorillas resting on turf under small trees, then going to an old lava outcrop with a small grotto from which cool air emerged. Below: the gorillas rest with their faces in the grotto's cool air as children put their heads into open refrigerators on hot days.

Democratic Republic of Congo (DRC). We left the hotel in Rwanda early to get to the border crossing into the Democratic Republic of Congo (DRC) at Goma. We found that, since it was Sunday morning, the customs officials were sleeping in. When we got to Goma airport our elderly DC3 flight was taking off from the terminal. Our taxi chased it to the end of the runway. There it slowed almost to a stop as we scrambled aboard, turning and accelerating before we could reach our seats. No one had taken our tickets. Welcome to 1986 DRC! The 40-minute flight took us south across beautiful Lake Kivu to Bukavu. Upon arrival at the Bukavu airport, all African passengers were directed one way, and we tourists were directed into a wooden shack where three Congolese boarder officials intimidated us for about 40 minutes, claiming we needed a special paper we had never seen, but we had to buy from them. If we refused, they would confiscate all our luggage and cameras. This was simple extortion costing each of us about USD$ 10 and could have been done in ten minutes, but they wanted us to understand who had the power, and it wasn't us.

We entered the decrepit Belgium colonial era town of Bukavu and drove straight to Kahuzi-Biega National Park to observe Eastern Lowland Gorillas, one of the four species of gorillas. Upon arrival we had to pay USD$ 100 each to take photos, even though our tour had been booked months earlier. We followed our guide, who gave us no directions or behavioural rules or instructions. We soon saw our first eastern lowland gorilla, a silverback sheltering under some low vines and branches. The guide approached the gorilla and provoked it by hacking away the vegetation around it with his machete, unimaginable poor manners in gorilla language. Finally, the silverback made a half-hearted charge at us. I tried to drop to the ground as we had been instructed in Rwanda, but a second guide held me up, scolding me for being afraid. "A man stands his ground!" This was gorilla management by human dominance, as taught by the Belgians who opened the park to tourists in 1969. This was so different from the respectful management of the mountain gorillas in Rwanda. A little later we observed a young male gorilla in a tree only using one arm. Close inspection showed his other arm caught tightly by detached snare wire. Even with Veterinarian Ken Gould, we were powerless to help and the guide and their helpers seemed unconcerned. Ken said the young gorilla may survive with only one arm or may die from infection. We saw enough and left the park.

That night we stayed in the old tourist hotel, with guestrooms upstairs, bar and brothel downstairs. In the evening, we visited a Belgian expat who had retired there. On his fireplace mantal was a shriveled gorilla hand as a souvenir. He brought out a cardboard box, revealing a blackened gorilla skull embedded with circular patterns of cowry shells, a native totem. I felt its malign power immediately and we urged him to put it away. The next day we returned to Bukavu airport, where Terry had arranged for a private Canadian pilot to return us to Goma. The pilot was late and we worried as several soldiers with beers and automatic rifles who had been watching us started our way. Just then our pilot arrived. We were all very glad to leave the backend of DRC and not keen to return.

Cameroon -1987. Terry Maple arranged with noted primatologist Dr. Stephen Gartlan, who was doing field studies in West Africa, to guide our Zoo Atlanta design team to visit and document natural habitats for the Cross River subspecies of western lowland gorillas, chimpanzees, and other primates at his research sites in Cameroon. Our team consisted of team leader General Curator Dietrich Schaaf, Ms. Trish Pfeffer, Dr. Gail Hern, a university researcher, and me. Cameroon was an uneasy country with suspicious military leadership. For example, tourists were not allowed to photograph public buildings, bridges or anything which could be construed as a military target. Steve had a special letter from the Governor allowing him to travel freely attached to our windscreen. This allowed us to travel through the frequent military checkpoints along our routes. We first traveled up the slopes of volcanic Mt. Cameroon (4,095 m., 13,435 feet) to the cloud forest level. The altitudinal zones allowed species to ascend or descend as world climates changed, making this mountain an important “refugia” for sustaining species in times of global climate change, as well as providing opportunities for speciation when species become separated. This topography helps to explain the diversity of primate species in the region. We next visited Korup National Park, where we joined a research group from the St. Louis Botanical Garden led by PhD. botanists Duncan & Jane Thomas and their two hardy young children. Mr. Fernando Ngomo (called “Fergie”), their native driver and cook, was a multilingual walking encyclopedia of local plants and animals. Stephan left us to attend to other responsibilities.

Wildlife in this lowland tropical rainforest were poorly protected. Gorillas had not been seen for several years. Once we heard chimpanzee alarm calls in the distance but never sighted any ourselves. I was able, with Fernando’s knowledgeable assistance, to sketch and photograph their favored food plants as well as the dominant characteristics of local forest trees, vines, understory, and groundcover species. I also wrote many sketch poems with these sketches, recording more of the spiritual and emotional qualities of our study environment.

During our hike from a plantation into our camp we negotiated a bridge made by a single log over the Ndian River, already occupied by marching army ants. We were instructed to run along the log bridge as quickly as possible and then hurry well off the path before stopping to remove the massively jawed guard ants attached to our skin or clothing.

It rained every afternoon in this rainforest. We spent a week in constantly wet clothes. During other times native bees enjoyed our perspiration. Several stings each day were the norm, even for Thomas’ young children, who cried only briefly before resuming forest play. Each day we started very early during the relatively cooler period and, following Fergie, hiked to different areas of habitat diversity. One day I stayed in camp to do more sketching while the team took an exceptionally long and difficult hike, where they were rewarded by observing wild mandrills.

Fergie, a hunter in his youth, could mimic the sounds of monkey-eating crowned eagles as we hid with him. These sounds attracted multispecies groups of primates in

“mobbing displays” intended to drive away predators. Thus, Fernando was able to record species and numbers for his ongoing population census of the park. Steve Gartlan and colleagues published this scientific census and sensibly included Fernando, who had little formal education, as a co-author.

Figure 19. Upper left: my jungle explorer outfit. Upper middle: standing on the high buttress roots of an ancient Zingana (Microberlinia brazzavillensis) tree. Upper right: our driver, cook, guide and local ecology expert Mr. Fernando Ngomo. Middle row: two of my botanical sketches from the field. Lower Left: photo I took of poacher’s snare in Cameroon. Right: simulated poacher’s snare in Gorillas of Cameroon exhibit at Zoo Atlanta made safe for use in a public place.

We said goodbye to our botanist colleagues, again joined by Steve Gartlan and moved southeast to Campo Reserve (now Campo Ma'an National Park). The park borders' large tropical hardwood lumber operations. Everywhere logging roads abut or enter the park. Poachers have wiped out wildlife populations for a distance of at least 10 kilometers from roads. We made several hikes through this impoverished zone, once with a local Chief. We saw several snares, including a snare with a dead water chevrotain, a tiny aquatic antelope. We saw blue duiker, black casque hornbill, tracks of sitatunga and forest buffalo. We also noted gorilla food plants such as Aframomum and saw banana trees broken down by gorillas or forest elephants. We heard three species of guenon monkey according to our guide. In our camp on dark nights we admired bioluminescent fungi, the soil around our camp glowing faintly. This is a very abbreviated account of our Cameroon research adventures. The many photos and sketches were very useful in selecting plants hardy in the Atlanta area which closely resemble those of the Cameroon tropical forest. Importantly, our zoo staff colleagues now had a personal understanding of what gorilla habitat is like. During our zoo design work, I found General Curator Schaaf rather conservative and not very supportive of untested animal management ideas. However, he was an excellent field leader. I'm also reminded of an important lesson taught by our driver, cook and guide, Mr. Fernando Ngomo. The lesson that genius is where you find it.

In Search of the Red Ape was the WSB TV special filmed during our tour of wild places in Indonesia beginning 20 April 1988. Our travelling team included Terry Maple, Terry's brother Max Maple as videographer, actress Ms. Stephanie Powers, her friend Mr. Michael Brockman, Bert Rudman WSB TV Producer, Dave Lyman, soundman, Dr. Ken Gould, of the Yerkes Regional Research Centre, Dr. Ellan Bradford from Zoo Atlanta, Indonesian landscape architect Arief Wiriadunata from our firm CLRR, and Mr. Les Gilbert, owner of the Australia based zoo and museum interpretive firm Magian. Les was recording wild soundscapes and making them available for our projects. Actor Stephanie Powers agreed to join us for no fee, provided she could personally tape a strong conservation message to the Indonesian President from our visit and she could bring her boyfriend. She has extensive conservation credentials, owns the vast Willian Holden Ranch near the Mt. Kenya Safari Club, and competes in annual polo competitions in Argentina, a very active retirement. Stephanie is second-generation Polish and speaks seven languages. She appeared in the long-running American TV series Hart to Hart, which was still running in Asia during our visit. Although she wore no make-up and kept her hair under an old bandana, people everywhere asked for her autographs, especially in airports. She was unfailing kind and generous, going out her way to put them at ease. She explained this was just part of show business, but her sincerity was genuine and admirable.

Terry had arranged first-class passage on Swiss Air, which we enjoyed in the first leg of the flight to Zurich. We passed a pleasant day at Zoo Zurich with then Director Christian Schmidt, a past student of Professor Heini Hediger. Our 25-hour transit via Bangkok and Singapore delivered us to Jakarta. Swiss Air's promise of first-class travel was no

longer honored. We visited the Jakarta Zoo, welcomed by then Director Linus. Terry especially enjoyed seeing their young orangutans traveling around the zoo in pony carts with bells ringing. I recall seeing the Sumatran rhino and later did a sketch-poem of it. We flew to the Sumatran city of Medan, visited an appalling crocodile farm, and then drove north around Lake Toba. The super-volcano eruption creating this lake occurred around 74,000 years ago was one of the great prehistoric geologic events. It changed the global climate and altered landscape and early human settlement pattern of a vast area. Near the lake we stopped to photograph a traditional Sumatran longhouse, an architectural form we later worked into Zoo Atlanta's orangutan exhibit. On this long drive Stephanie Powers entertained us by leading sing-alongs of Broadway hits from productions she had performed in.

Rafting on the Alas River. From Lake Toba we drove east through southern Aceh Province, to the Alas River. Stephanie berated soundman Lyman for giving candy to local children. "Don't you ever give local children something for nothing" she scolded. "Ask them to do something for you, then reward them," she admonished. As we were loading our four inflated rafts she assembled all our gear in a pile on the beach. Our gear was of great interest to the older children. Then she drew a line in the sand around our supplies. She turned to then and, with Arif our translator, told the, "Outside this circle we are all friends. Don't step inside this circle." Soon we began a three-day rafting experience through Gunung Leuser National Park. While there were a few brief white-water events, most of the river flow was gentle and quiet under towering emergent rainforest trees. Occasionally a large water monitor dropped from an overhanging limb into the river at our approach. We heard gibbons and looked fruitlessly for orangutans. Assured by our guide the river no longer contained crocodiles; we floated peacefully beside the inflated rafts in life jackets. We made camps on sand bars. On the second day we did some white-water swimming in our life jackets. At one point an illegal logging road reached the riverbank, and we observed cut logs prepared to be floated downstream in a national park.

On our final day the river widened and slowed, and we had miles to paddle with an approaching tropical thunderstorm to hasten us. Stephanie and I had the bow sides. Others on our raft were weakened by too much sun and too little drinking water (heat stress). She and I kept up a firm coordinated stroke for several hours, reaching our destination just before the storm.

Figure 20. Wild Sumatran orangutans I photographed at the Bohorok Centre, attracted by the food set out for the rescued orangutans.

Bohorok Orangutan Centre. Our next stop was the Bohorok Orangutan Centre at Bukit Lawang, Sumatra. The Director, Mr. Anton, had read Terry's text on orangutan zoo management and was very pleased to meet him. The streamside facilities area had been damaged by a recent flood, and crossing the stream in a tippy dugout canoe was exciting. In the forest young, orphaned orangutans were fed milk and bananas on high constructed platforms under the forest canopy. As they matured, they could return to the forest whenever they were able. One wild male orangutan was waiting for a chance to steal food. He was identifiable both by his size and because he hung over the platform to take food rather than climbing on to it.

Komodo Island. On May first, 1988, we drove back to Medan and flew to Bali via Jakarta. I had no idea that in eighteen years I would be planning major theme parks in Bali and Jakarta. The next day we left beautiful Bali in a small plane and island-hopped to Lompoc, and then to Sumbawa. We then took a worn-out bus to the Port of Sape', where we boarded the interisland ferry-freighter for the six-hour crossing to Komodo Island. We passed through many small volcanic islands, even sailing through now underwater calderas. Just after a blazing sunset we boarded a small boat to reach the Komodo Island dock and went to our nicely designed long-house accommodation raised on stilts above the ground. The next day I met Dr Dale Marcellini, a Reptile Curator I knew from the Smithsonian National Zoological Park. Dale was there to collect and transport Komodo dragon eggs back to the USA for the first time.

Figure 21. My quick sketch of one of the volcanic islands we sailed through. This is a remnant of the mostly submerged volcano's rim. Komodo Island would look much like this from the sea.

The Indonesian archipelago (17,000 to 18,000 islands) are often thought of as having wet tropical rainforest landscapes such as those on Java, Sumatra and Borneo. However, depending on their orientation to monsoon winds, some have both a wet and a dry side, Islands on the southeast zone are drier than those in the northwest. Komodo Island has an open savanna landscape of dried grass, scattered fan palms and broadleaved evergreen thickets following seasonal stream courses. Tame Timor deer and demanding crab-eating macaques live around the accommodations.

Once I made the mistake of venturing outside my room while eating an apple. A large male macaque with hair bristling, seeing the apple, charged me from 30m away. Not wanting to fight him for the apple, I threw it at him. He easily dodged and was satisfied, retiring eating my apple. One dark night I encountered an even darker form moving nearby. Thinking of hungry Komodo dragons, I backed away as a small Timor deer emerged from the shadows. Komodo dragons and wild water buffalo are common and potentially dangerous. These dragons, monitor lizards (*Varanus* species) can grow to 3m (10') in length and weigh 150 kilos (300lbs). As if this wasn't frightening enough, these also produce a slow acting venom. There was the story of a young Dutch tourist who decided to sleep on the beach rather than enduring the indoor nighttime heat. According to this story, all that was found in the morning was his pack, camera and sleeping bag. Perhaps he was an easy meal for a browsing Komondor monitor, or perhaps this was a fable contrived to control wayward tourists. We were not allowed to venture beyond the centre without a guide. The next day, one hour before sunrise, Les Gilbert and I left with our guide to record natural sounds. We followed a dry stream for a mile and Les started to record, but the guide made too much noise as he smoked and shuffled his feet. Les and I, in silent agreement, convinced the guide that he and I were to wait while Les moved just around the stream bend for a quieter stand. After about twenty minutes the guide realized Les was gone, shuck his head and we returned to the center. Les returned safely by himself two hours later.

The highlight of our visit was a staged Komodo Dragon encounter, which is no longer allowed. We walked a mile or so down the beach, followed by a guide leading a sacrificial goat. We then followed a dry stream bed inland past thickets of small trees casting deep shadows. White piles of calcium-rich monitor dung were scattered along our route. Then we noticed some of the dark shadows were 2.5- 3 m (8-10') long Komodo monitors, many drooling, waiting for their meal.

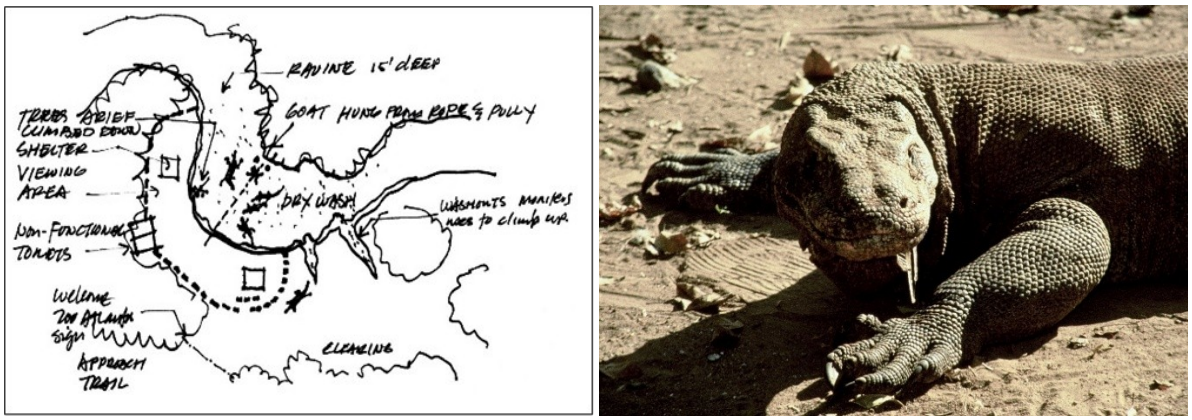

Figure 22. Left: my field sketch of the area where we witnessed the staged encounter with Komodo monitors. Right: One of the many large hungry Komodo Dragons who awaited us.

We reached a circle of closely spaced wooden stakes about 60cm (2') high forming a circle. We were told if we stayed inside this circle we would be safe. The goat was slaughtered and hung from a pole above a depression below our safe circle. Giant Komodo monitors climbed over each other to grab and hang from the goat carcass. We were told their pointed teeth were made for hanging on and not for cutting meat and bone. Several giant monitors hung and twisted until the carcass ripped apart and was swallowed in large segments. The guides used long forked sticks to push away any giant monitors that came too close to us. Terry Maple's younger brother Max, our videographer, lay on the ground to get a lizard-eye video and a big monitor immediately charged him. The guide with the forked pole rushed forward and pushed the monitor's massive head away inches in front of Max's camera. I learned that to a clever Komodo monitor upright people bring food and horizontal people are food!

Ujung Kulon National Park. From Jakarta we boarded the smaller of the two private motor yachts owned by Arif Wiriadunata's father-in-law, a member of Indonesia's ruling family, for an overnight voyage in the Sunda Strait to Ujung Kulon National Park on the far western end of Java Island. Arief had arranged for us to use the boat and crew, and we only paid for the fuel. The boat didn't have enough bunks for our entire group. I tried to sleep on the steel deck with life preservers for pillow and mattress. It was a long tropical night with warm bow spray keeping me damp.

Ujung Kulon is the last refuge of the Javan rhinos, the most threatened of the five rhino species. It was then estimated only around 60 individuals survived, so our chances of seeing any during our six-hour hike in the dense jungle were small. We saw many impressive species of fig trees, including towering banyans. We reached a small cove, swam among coral reef outcrops, and rested under coconut palms before returning. Early the next morning our yacht departed to arrive at Krakatoa volcano, whose explosive eruptions in 1883 devastated western Java, and cooled the entire earth. The vast caldera is now flooded with seawater, and we cruised near a fuming new cinder cone, Anak Krakatoa ("Son of Krakatoa") in its center.

Bogor Botanic Garden. After returning to Jakarta, I enjoyed a reunion dinner with Ben and Dani Ishaki, two of my University of Pennsylvania students who had graduated two years before. The next day they drove me up to the hill town of Bogor, a Dutch colonial settlement. Europeans went there to escape lowland tropical heat. Today, one of several Indonesian presidential palaces is located there. Bogor is home to the fine old Botanic Gardens with many mature tree specimens and a splendid avenue of giant fig trees. It was wonderful to have a long visit with Ben and Dani in such a beautiful setting. Eighteen years later I was to make many visits to this cloud forest area helping plan improvements to the Taman Safari Park near Bogar between 2006 and 2016. Our long return flight home was not the best. Terry Maple was a big man, and our promised first-class seats were not delivered. Terry had a seat and one-half and I had what was left from adjoining seats for a fifteen-hour flight from Jakarta to Zurich and the fifteen-hour flight to Atlanta. It could be said we were tired close friends.

Back to South America.

Ecuador - Rio Napo botanical research. The New York Botanical Gardens (NYBG) sponsored me to visit their tropical research station in Ecuador as a part of my research for designing new exhibits in the historic Enid Haupt Conservatory (See Chapter Seven). On 7 September 1993 I flew to Miami where I met NYBG Conservatory Curator Adam Lifton-Schwerner, Lead Horticulturalist Francisca Coelho and tropical botanist Bradley Bennett. We also visited the Fairchild Botanic Garden with their wonderful tropical palm collection. We were hosted by my old friend Director Bill Klien, who I had worked with on several projects when he was director at the Moris Arboretum in Philadelphia.

We flew on to Quito Ecuador, which I had last visited twenty-five years before while backpacking around South America with my wife Susan. The following day we began our long ride up into the alpine paramo, up and down a thousand switchbacks through cloud forest along the eastern front of the Andes. This is the zone of tree ferns and ericoides, pink-flowered heath-like plants with red growth tips. This is also the zone of earthquakes and landslips. Bently mentioned the life expectancy of any planted slope in this zone was about twenty years before it would be swept away. This favored fast-growing short-lived plant species such as purple-flowered Tibouchina, colorful orchids and bromeliads. The middle third of our descent was in deep, steep, canyons, often among smaller palm thickets including the palm species used to make “Panama hats.” Eventually we reached the shadows of the Amazon lowland rainforests along the rapid brown Rio Napo. Finally, we reached our destination, the Cabanas Alinahui - The Butterfly Lodge, in Tena Ecuador.

These comfortable facilities were operated by a German fellow and his Cuban wife. In the hotel registry I found notes left by Dr. Edward Ross, my entomology professor at UC Berkeley thirty years earlier. I was told he visited here often and so I left him a note. We explored this area for three days led by Bradly. I made sketches of the amazing variety of tree base forms. One research site was Jatum Sacha, a 950 ha (865 acres) eco-

tourist property. Bradley said eco-tourism was more financially sustainable than using the land for cattle, without the need for clearing.

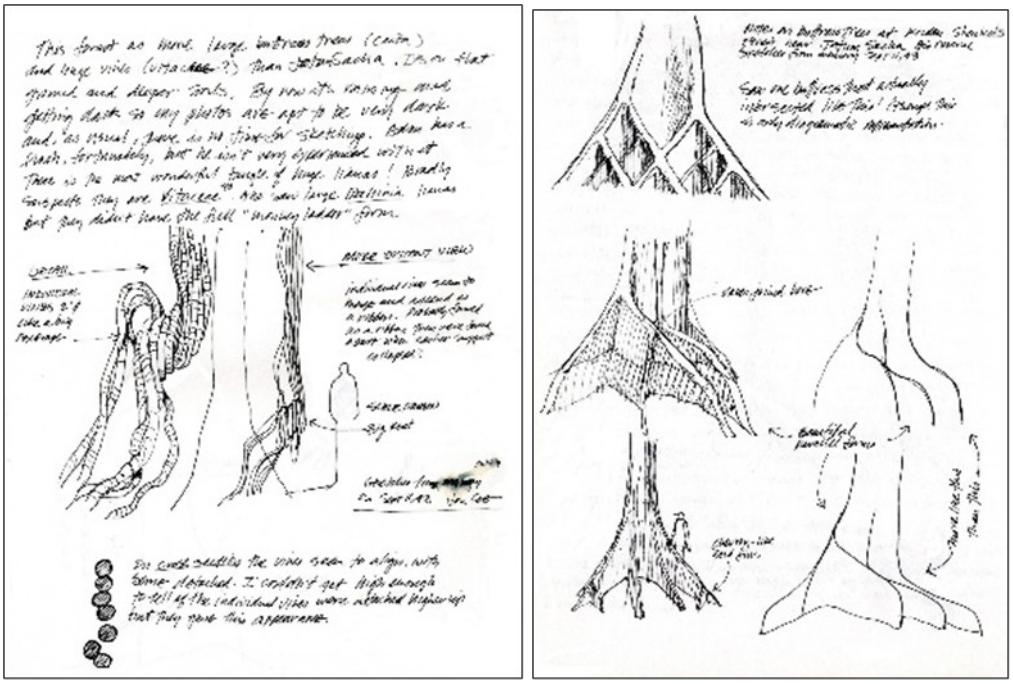

Figure 23: two pages from my journal of characteristics of vines and trees in the Amazonian rainforest in Ecuador.

Associação de Zoológicos e Aquários do Brasil Conference, Goiânia, state of Goiás -1993. Immediately after completing meetings for the Desert Park in central Australia, I flew from Alice Springs-Sydney-Los Angeles-Chicago-Philadelphia, a trip half-way around the globe with a travel time of 27 hours. After one night in my bed at home I then took the train to New York and flew São Paulo-Rio-Brasilia, travelling another 27 hours. Conference organizers were to pick me up for the two-hour drive on to Goiânia. No one met me. I didn't even know the exact location of the conference. After two hours of fruitless phone calls in half-remembered Portuguese, my cheerful escort appeared, and without explanation, we proceeded to the conference. There I met Dr. Devra Kleinman and Dr. Andy Baker, who were involved in reintroducing golden lion tamarins into Rio de Janeiro State, and with whom I would collaborate in the future. I gave my lecture in English with simultaneous translation into Portuguese, My Peace Corps Portugues communication skills returned sufficiently to chat informally with Brazilian conference delegates.

After the conference Sra. Susanna Sobral, our multi-lingual conference translator, kindly invited me to stay with her family in Brasilia for two days. We visited "Santuario", a monastery converted to a restaurant where we saw habituated wild maned wolves come up on their terrace for food, an amazing sight! She also showed me around Brasilia, the modernist national capital city. Seeing it in person confirmed my dislike for its cultural insensitivity. However, I enjoyed touring the Jardim Botanico, learning more

about the Brazilian biomes we had lived in and visited during our Peace Corps service and sketching some of the plants. A few examples are included below.

Figure 24. Three of my sketches from the Brazilian Botanic Garden in Brasilia.

Amazon River Cruise & Puerto Maldonado - 2001. When Susan and I had traveled around South America in1968, the freighter we planned to take up the Amazon River had a schedule change and we had to miss this experience. Thirty-three years later, we rescheduled our cruise, but this time with a more comfortable Abercrombie & Kent adventure tour on the MS Discovery. This ship was the first designed to carry up to 70 passengers around Antarctica, with a double hull for iceberg safety and bow thrusters for maneuverability. These features were perfect for Amazon River cruises during the Antarctic off-season. The program provided ten naturalist-lecturers in a wide range of ecological, botanical, and cultural subjects. We boarded in Manaus, Brazil and cruised 1,469 km, (about 920 miles) upriver to Iquitos, Peru, on the Solimões River (upper reach of the Amazon) with daily stops for river adventures in inflated Zodiac rafts.

In the distant past the Amazon River flowed west and reversed its course as the Andes Mountains arose. As a result, the river's 6,800 km (4,225 mile) long bed has very little slope. Seasonal rains flood vast areas creating unique flooded forests we were eager to experience.

Manaus is on the Rio Negro, the classic 'blackwater' river where we made an early stop for a swim. Here the river is 3.2km (2 miles) wide and up to 75m (250') deep. The water is clear and the colour of strong tea. When I dove down to a depth of 2-3m (7'-10') it was completely dark, as if I were swimming at midnight. Only my bubbles showed what direction was up. Blackwater is the result of tannin (humic acids and such) leached from leaves as water flowing through forest areas and is common in color, if not on scale to tropical forest streams I had seen in Africa. Igapó (blackwater flooded forest) surrounds the area with nutrient poor acidic sandy soils.

We then cruised into the famous "meeting of the waters" where the Rio Negro meets the "whitewater" (more the color of milk chocolate) of the Solimões River. We had only seen this vast river zone from the air in 1968. At this season the vast flooded forest region is

locally called “O Rio Mar”, “The River Sea”. At points the far riverbank is so distant it is nearly out of view. The várzea forest, inundated by whitewater, extended far beyond sight.

In reviewing my travel journal, I find mostly plant lists, botanical sketches and poems which flooded my consciousness with memories of our daily inflated Zodiac boat tours exploring the flooded forests, admiring the many birds, especially varieties of macaws flying to evening roosts in golden sunsets. Images from several encounters with white and pink Amazonian dolphins (Inia geoffrensis) emerge in memory. We visited flotations of giant waterlilies Victoria amazonica, over a meter across (please see sketch below). These are like giant solar cells, leaves collecting the tropical sun’s energy and thick underwater stems pumping air to roots submerged far below. We visited a village where houses and gardens floated on the rising and falling river tides. One evening touring along a flooded lane of towering tropical trees our boat passed a local Indian family paddling home in their dugout canoe as the sun was setting and flocks of macaws returned overhead to their night perches.

Puerto Maldonado (translated as “cursed port”) is in the Peruvian Amazon. We flew there from Iquitos via Lima and soon were on a smaller river in an open boat. Highlights include seeing giant river otters at a great distance and observing flocks of scarlet macaws landing and clewing on yellow clay cliffs at Tambopata. We were told the clay helps counter toxic chemicals in their food, allowing them to eat a wider variety of leaves and fruit.

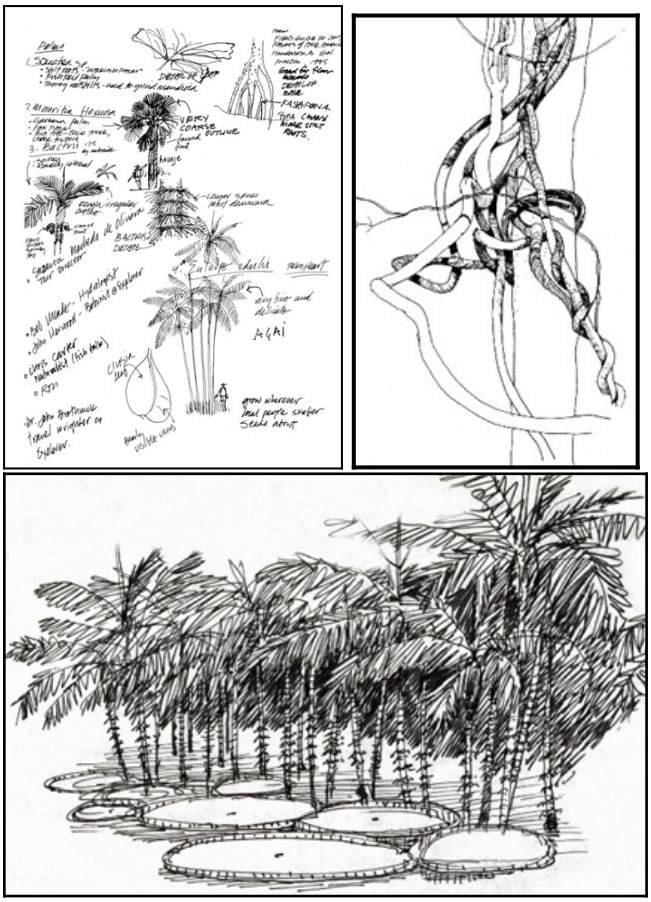

Figure 25: sketches from a page in my travel journal. Upper left: Studies of a variety of palms we visited. Upper right: Amazon liana study. Below: giant Victoria water lilies with Bactris palms in the Amazon flooded forest.

Cata Vina National Park, Baja - 2003. One highlight of my California Science Center (CSC) work (see Chapter Seven) was a field trip to Cata Vina National Park in Baja California, Mexico. CSC ecologist Chuck Kopczak led us, and we were joined by noted exhibit designer Jim Peterson and Julie Desmond from CSC. We drove about halfway down the narrow Baja peninsula to where the land becomes a coastal fog desert with extreme aridity but not extreme summer heat. Cata Vina is the only place where three of my favorite desert palms can be found together. The sturdy California fan palm Washingtonia filifera, is native to the deserts near Palm Springs California with a second population near Twenty-Nine Palms which may have been planted by ancient Native Peoples. These stately palms can be found as far south as Cata Vina. The tall slender Mexican Fan Palm Washingtonia robusta has been planted throughout Southern California and around the world but is native to Mexico only as far north as Cata Vina. The smaller blue-leaved Hesper palm Bramea armata also grows here and farther south. Another fascinating plant of this area is the Mexican frankincense tree Bursera fagaroides. It has swollen, flaking limbs, spiney stems and heavily aromatic leaves, like its biblical frankincense cousin the Boswellia tree found in North and West Africa,

Oman, Yemen, and India. Today we have a smaller Bursera growing in our Australian garden to remind me of the memorable visit.

Australia- Kimberly travel & sketches. I have traveled to many unique natural areas in Australia, often with Susan. 2016 we took a tour around the unique Kimberly region of northwestern Australia. Here are some of my photos and sketches.

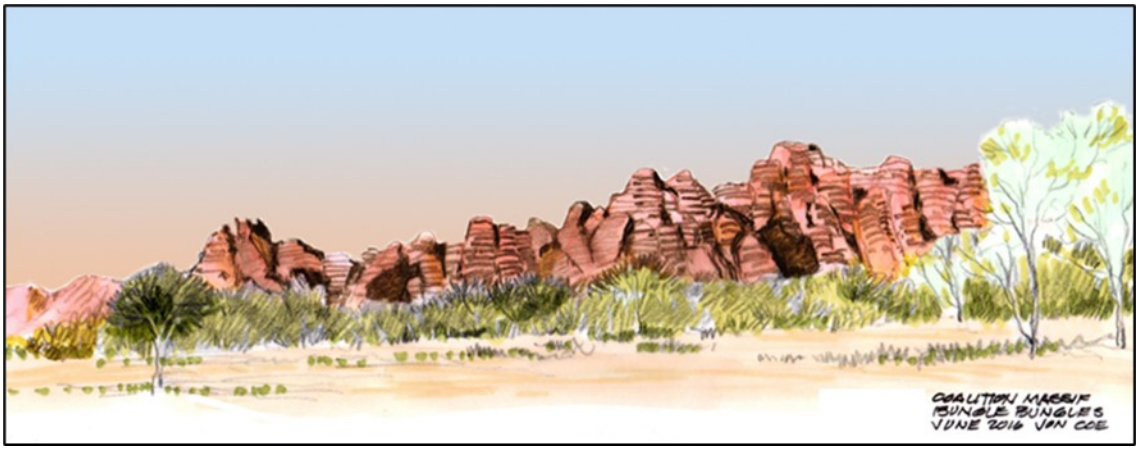

Figure 26: Upper left. helicopter view of the ancient, banded sandstone formations of the Bungle Bungles. Upper right: Mitchell Falls. Second row left: my sketches of Mitchell Falls. Third row: sunset over the Bungle Bungles. Fourth row: Wandjina art (Bradshaw style) dated between 26,500 and 20,000 years ago. By contrast, the famous cave paintings in Lascaux France date from 17,000 years ago and the oldest known animal paintings in caves are in Indonesia from about 61,000 years ago.

Travels in Northern Europe - 2017. My long-time friend Ms. Monika Filby, founder of the excellent ZooLex website and consulting firm, with whom I collaborated on the Frankfurt Zoo planning in 2009, helped organize the 2017 International Zoo Design Conference at Wroclaw, Poland with Zoo Director Radislaw Ratajszczak. I was invited to be a keynote speaker. I visited Monika and her husband Hans at their home in Vienna, then travelled by train across rural Czechia into Poland.

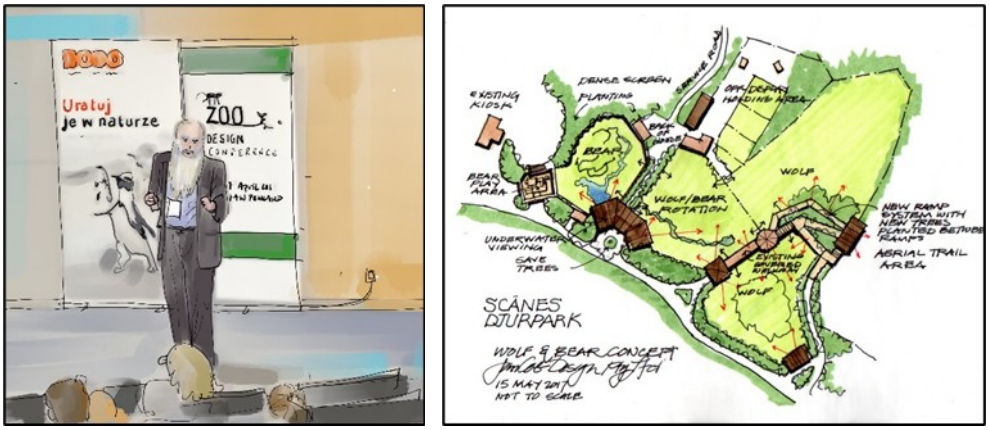

Figure 27. Left: sketch of me giving my lecture by German architectural historian Ms. Natascha Meuser. Right: sketch plan for wolf and brown bear facility renovations for Skånes Djurpark in Sweden. I don't believe these have yet been developed.

The conference was very successful, with two hundred-fifty attendees from thirty-nine countries. I met several European zoo designers such as Joke Klien and Erik van Vliet. I was surprised, in this growing age of mobile phones and selfies, how many attendees wanted their photo taken with me. Our post-conference tour visited Görlitz Zoo in eastern Germany where director Sven Hammer developed very clever opportunities for children and domestic animals.

After the conference Monika and I flew via Copenhagen to Finland and visited the Helsinki Zoo where Monika had done an excellent master plan. From Helsinki we took a large ferry south across an arm of the Baltic Sea to Tallin, Estonia. We spent two days consulting with Dr. Tiit Maran, a wildlife biologist who had just been appointed director of Tallan Zoo. We gave a planning talk to zoo staff and developed concepts for a new entry and improved hippo and otter exhibits. One evening Tiit showed us around the lovely walled Medieval city of Tallan, and the next day drove us to visit the stormy Baltic coast.

From Tallin we flew to back to Copenhagen and took a train across the Baltic to Swedish municipality of Höör where we were guests of Skånes Djurpark. This was the recent acquisition of owner Mr. Håkon Lund. Håkon, his assistant Ms. Therese Oddsen, and Chief Zoologist Anna Blinkowski hosted us. Located in Sweden, their main market area is nearby Copenhagen, especially for overnight guests. Their main attraction is the 20,000 sm (5 acre) “Shaun the Sheep” themed children’s fantasy farm area. However, this is a very large park featuring Nordic species such as bears, wolves, moose, red deer, otters, and smaller species. Håkon was keen to follow my concept of the “Unzoo”, in which animals live on very large enclosures and visitors are contained in vehicles, on boats, immersive trails, and in overnight accommodations. I developed sketches for naturalizing their eagle, wolf, and bear areas. As I said in my journal notes, “This zoo is a star for realistic possibilities and light years ahead in staff culture.”

We returned to Denmark and spent a day visiting Copenhagen Zoo. While large for a city zoo, it has added layer upon layer of exhibits and overlooks, resulting in human dominated and cluttered experience in my view. We spent several hours with Elephant Manager Claus Pederson touring their amazing facility. While relatively small by present standards, it is exemplary for a cool-climate zoo in enrichment features such as automatic elevated feeder systems and deep mulch bedding mounded up daily.

Returning the Vienna, Monika and Hans gave me an amazing tour of their glorious historic city. A memorable highlight was Schönbrunn Zoo established as a private menagerie by Empress Maria Theresa in 1752. Zoo staff have made clever improvements despite historic preservation constraints. This was the zoo where Monika worked as a ground’s keeper aspiring to be a designer before studying Landscape Architecture at the University of Georgia.