

2018 Newsletter

We started 2018 at the end of a visit to Brazil, returning to the US in mid-January. April was a big travel month for us. We flew to Eugene first to see Ethan, Ami, Yak, MK, and the grandkids (more on them later if it beats the editorial deadline). From there we went to New Orleans for nephew Scott and Heather's wedding, and finally flew to San Francisco to see Aunt Lillian, who had been evacuated from her home and survived the big wildfire in Santa Rosa. Driving south the next day, we stopped for dinner in Marin County to see my old Hun classmate Paul Rosenblum and his wife Jeanne. In the morning we drove back to San Francisco and had dinner with my old lobbyist friend from Washington DC, Dave Weiman and his wife Nancy on the bay in Sausalito. We had a great time everywhere we went!



Grandchildren with Nana: Zara, Pan, Urah
in Hendricks Park, Eugene



French Quarter, New Orleans

Zara's passion is sports and she is currently in volleyball season.

Urah is wrapping up her first season of Ultimate Frisbee, blowing reading comprehension and language arts scores away.

Pan is a mat whiz, board game nerd, magic card player and video game crazy, just like his dad.



NOLA bar sign



Tryg & Aunt Lillian at her home in Santa Rosa



MK, Yak & Sonia hiking and at new home

Yak's been busy this year, working as a cardio-metabolic nutritionist and coach on the clinical team with Vida Health, doing individual consulting with patients with heart disease and diabetes. He is poised to become the new Diabetes Prevention Program coordinator in this up-and-coming company that has contracts with Stanford, Duke University, MD Anderson Cancer Center and United Healthcare, among others. He's living with his sweetheart MK Britton in their new house in Eugene. He still keeps himself busy on the side with volunteer work, playing weird, noisy and eclectic rock, and is now almost a couple years deep in the intensive (and exhaustive) study of Thai martial arts including Krabi Krabong and Muay Thai Boxing. He remains a left wing radical -at least as defined by establishment propaganda. MK reports that she is still working full-time as an administrative assistant for Willamalane Park and Recreation District in Eugene. She recently got reclassified to a higher position and pay grade (hooray!). MK spent a fair amount of her free time this summer in the wilderness learning to horse camp and clear trail with the Backcountry Horsemen of Oregon.

Ami started a new position at Peace Health, one of Eugene's biggest hospitals. She's doing mental health evaluations in the emergency department, and was promoted from a per diem to a full-time position this year!

Ethan remains a software engineer at Concentric Sky, working on a variety of projects, notably:

- <https://badgr.io>, an open source tool for achievement badging used by Mozilla and many major educational institutions,
- and <https://www.lrng.org/> providing community based educational solutions to youth internationally.

On May 12 Sonia and I returned to Rio, finding it mostly unchanged, but starting to heat up politically as a presidential election was just six months away. To follow chronological order, there is a story entitled “Recent Election Results in Brazil” near the end of this newsletter.

To take a break and also to celebrate my birthday, Sonia and I decided to travel a bit to take in a total eclipse of the Moon, happening at a time when there was another astronomical spectacle taking place with Mars was at its closest to Earth. We went to a location where we thought there would be less light located on the other side of Gávea, a large mountain toward the western end of Rio. We stayed at a hotel where we could see the astronomical events from the beach and also from the pool area on the top floor.

A lunar eclipse occurs when the Moon passes directly behind Earth and into its shadow. This can occur only when the Sun, Earth, and Moon are exactly or very closely aligned (in *syzygy*), with Earth located between the other two. Due to the occurrence of a reddish color, a totally eclipsed Moon is sometimes called a *blood moon*, and we could see why. Mars was located close to the moon, and of course it also had a reddish tint.



Total lunar eclipse, July 27, 2018

Trip to Viet Nam & Cambodia

In 2016 we made plans to visit Hanoi, cruise the Mekong River in Cambodia and Viet Nam, visit the world-famous ruins of Angkor Wat, Ho Chi Min City (formerly Saigon), and the old Vietnamese Imperial City of Hue in October/November, 2018. In order to have time to obtain hard to get tourist visas, we had planned to return to the US in August to apply. However, Sonia's sister Ilma's health had taken a turn for the worse this year and we decided that we needed to remain in Brazil, which caused us to have to cancel our trip to Indo-China. Luckily we had travel insurance. We hope to be able to make this journey some other year.

Ilma's Passing

On September 7, Ilma passed away after a long, tough, battle against cancer. This was an extremely sad event which was very difficult for all the members of our Brazilian family, especially Sonia.

The following afternoon we attended a Catholic mass where she was eulogized by her daughters Ana and Elisa and prayers were said. Ilma was laid to rest in Cemitério São João Batista in Rio and on the seventh day after her death.

At the wake, Sonia asked me to read the following poem by the Senegalese poet Birago Diop (1906-1989):

The dead are not dead

Those who have died are never gone:
they are in the fading shadows,
in the shadows that deepen,
they are in the firebrand that flames,
in the fire that is dying.
The dead are not dead.

The dead are not under the earth:
they are in the trees that rustle,
in the woods that groan,
they are in the water that sleeps,
in the water that flows,
they are in the hut,
they are in the crowd.
The dead are never gone.

The dead did not go up in flames:
they are in the grasses that weep,
they are in the whimpering rocks,
they are in the forest,
they are in the house.
The dead are not dead.



Ilma, Tryg and Sonia in 2014

I humbly offer the following tribute to Ilma as I knew and loved her.

Ilma Madeira de Ley Leite was the matriarch of her family. Toward the end of her life she fought the cancer that invaded her with all the force she could muster, aided by her stoicism.

Ilma was a queen, showing her power through understatement. At Christmas Eve dinners she was the perfect hostess, standing after everyone else was seated, attending to their needs and making sure that all was being served properly. After everyone had finished their first helping, she would finally sit down and have a bite to eat herself.

Over the past 15 years, I had many interesting conversations with Ilma. I enjoyed them greatly, partly because I could understand her Portuguese better than just about anyone else's. She expressed herself very clearly, speaking very distinctly with very little accent even though she was a lifetime resident of Rio de Janeiro, where the Carioca accent can often be quite strong.

One interest that I shared with Ilma was a deep interest in wild animals and their habitats. Her knowledge of this subject came from accounts in books, newspapers and magazines, as Ilma was an avid reader. Another source of her knowledge on wild species and habitats was TV shows like *Animal Kingdom* and *National Geographic*, which she watched frequently. I sometimes watched with her and was amazed at the quality of the shows.

Ilma also spent a lot of time writing letters to the editors of *O Globo* and *Folha de São Paulo*, newspapers in Rio and São Paulo, expressing her liberal viewpoint on political issues.

As a protective big sister, she sometimes worried about some of the animals and outdoor activities to which I exposed Sonia. An example was our backpacking trip into Sequoia National Park. Near the trailhead, while still in our car, we stopped next to a yearling black bear which couldn't have been far from his mother. After we hiked three miles in to a campsite, during the night I heard what could only have been a bear thrashing around in the bushes near our tent. That incident worried her, as did our

whitewater rafting, sea cave kayaking, ocean sailing and other “daredevil” activities into which I led her little sister.

Before I travelled to the Amazon, knowing my interest in swimming, Ilma was quick to point out the danger of the *candiru*, a small parasite fish that detects the smell of urine in the water and will swim up the human urethra and lodge in the bladder. I made very sure not to pee and to wear a tight fitting *sunga* swimsuit when I swam in the *Rio Negro* on that trip!

Ilma taught her three daughters well the way to succeed in life through education and its application within a chosen profession. These young women and their children have added to their Aunt Sonia’s life in great measure, as their mother/grandmother did.

To Sonia, Ilma was a close lifetime companion. They talked at length every day, even while we were in California, and Sonia would visit Ilma’s home at least once a week when we were in Rio de Janeiro. One of their favorite topics was Brazilian politics, where in recent decades the focus was the workers’ party led by President Lula da Silva and his successor, Dilma Rousseff. The sisters also frequently discussed moral issues such as abortion and euthanasia, where Ilma took a more conservative approach. They knew each other as well as one can know a fellow human being, but always found an unconsidered detail to illuminate together.

In mid-October, we thought it might help to close out the first stage of grieving if we started travelling again. We decided to fly to a part of Brazil I had wanted to go for a long time: Brasília and its surrounding region, known as the *Cerrado*.

Sonia and I and our niece Érica then took an interesting and challenging 11-day trip to the federal district of Brasília and the state of which it is part--Goiás. It rained hard at least once every day, but while this had the potential to cause

problems for us, we were prepared for it with anoraks and an umbrella. We also had some luck with the timing of the downpours.

Brasília was quite as interesting as I had always suspected it would be. While it is quite populous, it stands in stark contrast to other large cities in Brazil in that it was founded purposely quite late in Brazilian history and is very organized. The architecture is modern and very beautiful, and lakes and aquatic gardens mitigate the dryness of the *Cerrado* environment. The following photos are of architecture and gardens designed by Oscar Niemeyer and Roberto Burle Marx.



Ministry of Foreign Affairs palace outdoors



Ministry of Foreign Affairs palace indoors



JK Bridge

Juscelino Kubitschek, President from 1956 to 1961, ordered Brasília's construction, fulfilling the promise of the Constitution and his own campaign promise. Building Brasília was part of JK's "fifty years of prosperity in five" plan. Lúcio Costa won a contest to be the main urban planner. Unlike most cities, which add to a grid or expand the urban plan with growth, Costa's design provided the complete and large-scale plan. The initial phase of Brasília was completed on April 21, 1960, in only four years.

I'd like to include a couple of personal comments here. First, the rapid delivery of this monumental project reminds me, albeit on a lesser scale, of the work my maternal grandfather Paul Troast did in constructing the NJ Turnpike. Also, in Brasília I was interested to view the television tower since my application to the Peace Corps in 1967 was for a program designed to establish a public TV channel in Brasília. The TV Tower in Brasília is one of the few important buildings there that was not designed by Oscar Niemeyer. It was built in 1967 and at 224 meters is the fourth highest construction in Brazil.



Brasília TV Tower



Cathedral of Brasília clerestory



Cathedral of Brasília designed by Oscar Niemeyer

The Brazilian Federal District extends well beyond the planned city of Brasília, including a large suburban area that contains the majority of Brasília's three million residents. This makes the city, after much bigger São Paulo and Rio, the country's third most populous.

Brasília is located within the state of Goiás, which is in turn part of the ecoregion known as the *Cerrado*. I had been hearing about this endangered region of Brazil

for more than a decade but had never been there. The *Cerrado* has enormous importance. It is the biome most forgotten by Brazilians, but contains water resources second only to Amazônia in volume.

Ecoregion of the Year: *Cerrado*

(edited from Wikipedia, the free encyclopedia)



The Cerrado ecoregion lies almost entirely within Brazil.

Map by World Wildlife Fund, aka World Wide Fund for Nature

The *Cerrado* is a vast tropical savanna ecoregion of Brazil. The *Cerrado* biome core area lies within the *Planalto Central* of Brazil, encompassing the Brazilian states of Goiás, Tocantins, Mato Grosso, Mato Grosso do Sul, and Minas Gerais. Habitat types of the *Cerrado* include forest savanna, park savanna, and savanna wetlands. The second largest of Brazil's major ecoregions after the Amazon rainforest, the *Cerrado* accounts for a fifth of the country's land area. Characterized by enormous ranges of plant and animal biodiversity, the World Wildlife Fund considers it the biologically richest savanna in the world.



The *Cerrado* is characterized by unique vegetation types. It is composed of a shifting mosaic of habitats, with the savanna-like *Cerrado* itself on well-drained areas between strips of gallery forest which occur along streams. It is estimated that around 800 species of trees are found in the *Cerrado*.

Soil fertility, fire regime and hydrology are thought to be most influential in determining *Cerrado* vegetation. *Cerrado* soils are always well-drained. Much as in other grasslands and savannas, fire is important in maintaining and shaping the *Cerrado's* landscape; many plants in the *Cerrado* are fire-adapted, exhibiting characters like thick corky bark to withstand the heat. *Cerrado* vegetation is believed to be ancient, dating to before Africa and South America separated about 140 million years ago.

Fauna

Gallery forests (closed canopy tall forest) serve as primary habitat for most of the mammals in the *Cerrado*, having more water, being protected from fires that sweep the landscape, and having a more highly structured habitat. Eleven mammal species are endemic (native) to the *Cerrado*. These include large herbivores like the Brazilian tapir and Pampas deer and large predators like the maned wolf (see below) cougar, jaguar, giant otter, ocelot and jaguarundi. Although the diversity is significantly lower than in the adjacent Amazon and Atlantic Rainforests, several species of monkeys are present, including black-striped capuchin, black howler monkey and black-tufted marmoset.

History and human population

Xavantes, Tapuias, Karajás, Avá-Canoeiros, and other tribes were some of the first indigenous peoples occupying different parts of the *Cerrado*. Many of them were nomads and explored the *Cerrado* by hunting and collecting. Others practiced *coivara* agriculture, an itinerant type of slash-and-burn agriculture. Taking advantage of the sprouting of the herbaceous stratum that follows a burning in the *Cerrado*, the aboriginal inhabitants of these regions learned to use the fire as a tool, to increase the fodder to offer to their domesticated animals.

Until the mid-1960s, agricultural activities in the *Cerrado* were very limited, directed mainly at the extensive production of beef cattle for subsistence of the local market, since cerrado soils are naturally infertile for agricultural production. After this period, however, the urban and industrial development of Southeast Brazil forced agriculture to Central-western Brazil. The transfer of the country's capital to Brasília also attracted migration to the central region. From 1975 until the beginning of the 1980s, many governmental programs were launched to

stimulate development of the *Cerrado* region, mainly through agricultural subsidies. As a result, there was a great increase in soybean and cattle production.

The rapid expansion of agricultural activities and population growth (from 36 to 76 million) between 1970 and 2010 also rapidly reduced the biodiversity of the ecoregion.

Agriculture

The soils of the *Cerrado* were not suitable for agriculture until researchers at Brazil's agricultural and livestock research agency, *Embrapa*, discovered that it could be made fit for industrial crops by adding phosphorus and lime. In the late 1990s, between 14 and 16 million tons of lime were poured on Brazilian fields each year. The quantity rose to 25 million tons in 2003-4, equaling around five tons of lime per hectare. (A hectare is about 2.5 acres.) This manipulation of the soil allowed for industrial agriculture to grow exponentially in the area.

Researchers also developed tropical varieties of soybeans, until then a temperate crop, and currently, Brazil is the world's main soybean exporter, largely due to the boom in animal feed production caused by the global rise in meat demand. Today the *Cerrado* region provides more than 70% of the beef cattle production in Brazil. Large parts of the *Cerrado* are also used for the production of cellulose pulp for the paper industry, with the cultivation of several species of eucalyptus and pine, but as a secondary agricultural activity.

Charcoal production

Charcoal production for Brazil's steel industry is second to agriculture in the *Cerrado*. They actually are quite intertwined. When land is being cleared to make more land for agriculture, the tree's trunks and roots are often used in the production of charcoal, helping to make money for the clearing. The Brazilian steel industry has traditionally always used the trunks and roots from the *Cerrado* for charcoal, but now that the steel mills in the state of Minas Gerais are the world's largest, it has taken a much higher toll on the *Cerrado*. However, as a result of conservation efforts and the rapidly diminishing vegetation in the *Cerrado*, the steel industry is now also receiving charcoal from eucalyptus plantations and these efforts are growing.

Conservation

The *Cerrado* is the second largest biome in South America (after the Amazon). It is underlain by the Guarani Aquifer, which is the largest underground freshwater reservoir in South America. This aquifer is the largest supplier of water to the

Amazon, by far the world's largest river. To say this another way, the *Cerrado* is the largest source of freshwater for the country that has the world's largest freshwater reserves.

Ironically, Brazilian agribusiness and government ministers seem to regard the *Cerrado* as having little or no conservation value, and the government has protected merely a few percent of the *Cerrado* as federal reserves. About 46% of the *Cerrado* has already been deforested, with the gallery forests, those with the greatest biodiversity) the most heavily affected. It is estimated that only about 20% of the original vegetation remains intact today.

In summary, during the last 25 years this biome has been increasingly threatened by industrial single-crop monoculture farming, particularly soybeans, the unregulated expansion of industrial agriculture, the burning of trees for charcoal and the development of dams to provide irrigation. This industrial farming of the *Cerrado*, with the clearing of land for eucalyptus and soybean plantation, has grown so much because of various forms of subsidy, including very generous tax incentives and low interest loans. This has allowed the establishment of a highly mechanized, capital intensive system of agriculture. There is also a very strong agribusiness lobby in Brazil and in particular, the production of soybeans in the *Cerrado* is influenced by large corporations such as Archer Daniels Midland, Cargill, and Bunge, these latter two directly associated with the mass deforestation of this biome. Sadly, the future of the *Cerrado* is not a bright one. (See discussion of current Brazilian politics below.)

Species of the Year

The *Lobo Guar* (Maned wolf) is the largest *canid* of South America. Its markings resemble those of foxes, but it is not a fox, nor is it a wolf. It is the only species in the genus *Chrysocyon*. The *Lobo Guar* is found in grasslands with scattered bushes and trees, principally in the *Cerrado* region of Brazil. The International Union for Conservation of Nature (IUCN) lists it as near threatened, while it is considered a vulnerable species by the Brazilian government.



Lobo Guará

The preferred habitat of the *Lobo* includes grasslands, scrub prairies, and forests. Fossils of maned wolves from the Holocene and the late Pleistocene have been excavated from the Brazilian Highlands.

Unlike other large canids such as the gray wolf, the *Lobo Guará* does not form packs. It hunts alone, usually between sundown and midnight. *Lobos* rotate their large ears to listen for prey animals in the grass. They tap the ground with a front foot to flush out the prey and pounce to catch it. It kills its prey by biting on the neck or back, and shaking the prey violently if necessary. Monogamous pairs may defend a shared territory of approximately 30 km² (12 sq. mi), although outside of mating, the individuals may meet only rarely. The territory is crisscrossed by paths that the *Lobos* create as they patrol at night.

Both female and male *Lobos* use their urine to communicate, e.g. to mark their hunting paths or the places where they have buried hunted prey. The urine has a very distinctive odor, which some people liken to hops or cannabis. The responsible substance very likely is a pyrazine, which also occurs in both plants. The distinctive odor of its territory markings has earned it the nickname "skunk wolf".



Destruction of the *Cerrado* by mechanized agriculture is the greatest threat to the *Lobo Guará*.

Sonia's and my primary activity during our trip to Brasília and Goiás was hiking. This focused on the many beautiful waterfalls (*cachoeiras*) in and near the Chapada dos Veadeiros National Park, and the countryside around the colonial city of Pirenópolis. It was generally hot, our fellow hikers and guides tended to be quite a bit younger (the terrain involved lots of descents and ascents (to reach and return from the pools below waterfalls), and the daily distances varied from just a kilometer (0.62 mile) or two up to 13 kilometers (8 miles). Even or niece Érica had to admit that it was tiring (and she is a real trooper!). We were very fortunate as our guides, who were pretty much required, were uniformly well versed in ecology and usually knew how much information was enough. At times, we didn't hold up as well as we might have, nor did our equipment—see photo below of Tryg's Merrell boots. Sonia's Adidas outdoor model held up somewhat better: the sole only started to fall off one boot while we were hiking. Both of Tryg's had to be thrown away!



Rio Negro waterfall



Ilsamar and Chico Mendes

Chapada dos Veadeiros National Park is located on an ancient plateau estimated to be 1.8 billion years old. President Juscelino Kubitschek created the park in 1961 and it was listed as a World Heritage site by UNESCO in 2001. The park is maintained by Chico Mendes Institute for Biodiversity Conservation, named after the great Amazonian rubber tapper and early environmental activist, who was martyred in 1988.

Mendes was assassinated in his home by the son of rancher Darly Alves da Silva. The shooting took place one week after Mendes' 44th birthday, when he had

predicted he would "not live until Christmas". Mendes was the 19th rural activist to be murdered that year in Brazil.

Mendes' murder made international headlines, and led to an outpouring of support for the rubber tappers and environmental movements. In March 1989, a third meeting was held for the National Council of Rubber Tappers, and the Alliance of Forest Peoples was created to protect rubber tappers, rural workers, and indigenous peoples from encroachment on traditional lands.

Thanks in part to the international media attention surrounding the murder, the Chico Mendes Extractive Reserve was created in the area where he lived. More than 20 such reserves, along the same lines as Mendes had proposed, now cover more than 33.6 million acres.

Photos Taken at Chapa dos Veadeiros







Érica & Tryg with Chapada in background



shirt repair!



Tryg's boots after 13 km. hike!



Jacarandá at São Bento Ranch



Water, stone & wood



Just stone



Wet stone





untouched watershed



Recent Election Results in Brazil

On September 30, I took part in my first Brazilian demonstration, the *Éle não!* (Not him!) protest against the “Trump of the Tropics,” Jair Bolsonaro, which was organized by women. As you can see below, there was a huge turnout and everyone in attendance was feeling good about it, but it wasn’t set up to include speakers, and considering the outcome of the election held a few weeks later, it didn’t seem to have much of an impact. For one thing, Bolsonaro’s supporters, who never seemed very concerned about his anti-democratic, anti-environmental, racist and misogynist rhetoric, staged a large demonstration in São Paulo soon afterward. For another, his party spread a lot of fake news about his principal

opponent, Fernando Haddad and his Workers Party, scaring undecided voters with their lies on the social media. Basically, Bolsonaro's victory seemed to rest on his promise to crack down hard on crime and do whatever else is necessary to end the 2008 recession, still going strong ten years later.



Mass demonstration against Bolsonaro filled the square in front of the old Opera House in Rio.

To describe Jair Bolsonaro's emerging environmental policy, the president-elect has stated that "Brazil protects the environment more than any other country", but unfortunately he views this as a big problem for the country's economy, which he believes is suffering way too much environmental regulation. Does this sound familiar? Much like his American role model, Bolsonaro also believes that Brazil's environmental policy is "suffocating the country". (NY Times, 10/17/18)

According to Reuters, his campaign "would reduce penalties against those who violate environmental laws". Presumably, these would include fines levied against illegal logging in endangered bioregions such as *Amazonas* and the *Cerrado*. Converting forestland to grow the top two Brazilian commodities—soy and beef—has accounted for about a fourth of all global deforestation between 2001 and 2015". (NY Times) While Bolsonaro has recently pulled back from his stated desire to withdraw from the Paris climate change accord (as a result of criticism

from leading European nations), Brazil's Paris pledge to eliminate illegal deforestation by 2030 now appears very unlikely to be fulfilled under the new government, which has yet to name a Minister for the Environment. What is likely is that Blairo Maggi, the "Soybean King" (and last Minister of Agriculture) and the BBB ("Beef, Bible and Bullet") Coalition in the Brazilian Congress will get rid of government staff and policies that prevent removal of invaluable Amazon and *Cerrado* forestland to make room for more pasture for beef production and fields for soybean plantations.

Bolsonaro's new Minister of Agriculture, Tereza Cristina, will control the Ministry of the Environment, which she said will be "totally restructured". She has sought to deny the obvious fact that the recent cancellation of the proposed merger of the Environment and Agriculture Ministries was not due to possible negative impacts on exports (as a result of European requirements for certification of methods used in Brazilian forestry and soybean production).

Brazilian environmentalists call Tereza Cristina the "poison queen" because of her taste for pesticides. She became known politically without her surname and is the only woman among the 15 ministers appointed by Bolsonaro. She is his "token" woman, but appears to wield the power to destroy much of what is important to the future of the planet.

Plans for 2019

The year ahead promises to be a busy one. Major multi-year projects we plan to complete next year are publication of:

1. The English translation of Sonia's novel, *Pride and Dignity* about her family in Brazil and Portugal during the 20th century, and
2. Volume I of Tryg's memoir, *Rebel With a Cause*, covering his life before retirement (1946 up to 2004)

In summary, supporting Ilma and in the end losing her made 2018 a difficult and very sad year for us. We miss our dear sister very much and look forward to continuing on with our lives in the year ahead. We hope to see you again in 2019. In the meantime, we send you and your family Season's Greetings & Best Wishes

for Peace in Your Life and in the World. *Sonia & Tryg*