A brief description of sites we will visit in 2018:

- 1) Poás Vocano_ -- Costa Rica has many volcanos, including Poás. We will go to the edge of the caldera, where (if it is not too cloudy) you can look down into crater. There are, or maybe were, a lake and fumeroles at the bottom of the crater. The volcano was active in 2017, and I heard that the lake evaporated. We will take a short hike in the surrounding forest, which is pre-montane humid, elfin forest. The trees are dwarf and twisted. It looks like something out of Harry Potter.
- 2) <u>La Pacifica reserve and Palo Verde National Park</u>, or <u>Santa Rosa National Park</u> have dry, deciduous forest typical of the Pacific slope of Central America as far north as Mexico. The area is very hot and dry for several months each yea. During the dry season (while we are there), many of the trees will have dropped their leaves. There are interesting insects, very large ctenosaurs (igunid lizards) and monkeys (howler, capuchin and spider). Palo Verde National Park has RAMSAR convention protected wetlands that have abundant bird life during the dry season (unless it is so dry that the wetlands dry up. It happens.) If the wetlands are dry, we may go to Santa Rosa instead, where there is a historic ranch house. An American named William Walker usurped the government of Nicaragua in 1855, and he tried to invade Costa Rica in 1857.

We will sample dry forest on the property of the Hacienda La Pacifica. We will also visit La Casona La Pacifica. La Casona was built in the early 1900's by former Costa Rican president Don Bernardo Soto and his wife Dona Pacifica Fernandez. It has a colony of bats, and it is a fascinating example of tropical architecture of the period.

- 3) The <u>Santa Elena Skywalk</u> is in cloud forest in the Tilarán Mountains. There are a series of bridges that are suspended at the tree tops, so that it is possible to see the very abundant life that occurs only in the forest canopy. We often see Resplendant Quetzals there an endangered species, the males of which have a tail about a meter long. This site is cool and perpetually bathed in clouds. We will also visit a site with very abundant hummingbirds of several different species, and we will do a study of the aggression among the birds.
- 4) <u>Monteverde</u> is home to the famous Monteverde Cloudforest Reserve. It includes a midelevation, old-growth cloud forest, marked by abundant bromeliads, orchids, tree ferns, and other species adapted to the high humidity, cool environment. It was once home to the golden toad, now probably extinct. We will hike in the Cloudforest reserve, which might be my favorite spot on Earth.
- 5) Arenal This is a beautiful, cone-shaped volcano that erupted in 1968. It is sometimes still somewhat active, with lava flows visible on its flanks at night. In this area, we will visit the national park and walk on the lava fields at the foot of the volcano. There, there are interesting examples of primary succession on a physically very stable substrate (in

contrast to the succession on the sandy beaches). There are also hiking trails through Atlantic rain forest, complete with hanging bridges through the canopy.

- 6) <u>Corcovado National Park and Proyecto Campanario</u> Corcovado is least developed area of Costa Rica, with magnificent rainforest. It has abundant tree ferns. There are also cycads: broad-leafed gymnosperms that became abundant during the late Carboniferous, but that are uncommon now. We often see Scarlet Macaws there.
- 7) Cano Island is a marine biological reserve off the coast of Costa Rica. I have been on the island, but I have never been snorkeling there. Here is what a web site says about it:

<u>Cano Island</u> is an amazing marine biological reserve with virgin blue waters making it the perfect tropical paradise for snorkelers and divers. It is home to and spectacular variety of stunning marine flora and fauna and is famous for having Costa Rica's largest concentration of coral-building organisms along the Pacific Ocean. Visitors have rated **Cano Island as having the best snorkeling** and diving in Costa Rica!

This may be a little over-hyped: the reefs on the Atlantic side of Costa Rica have higher species richness than on the Pacific side. They also have more sharks. That said, Cano Island is beautifully pristine, and I am definitely bringing my snorkel mask.

8) <u>Cerro de la Muerte</u> – This is a mountain pass at 3400 m. The vegetation is páramo: stunted, tundra-like vegetation dominated by dwarf bamboo and ericaceous species similar to those in northern Canada. It is fascinating to go from one of the hottest places in the country (Corcovado) to one of the coldest during a single day.

NOTE: the final itinerary, and the exact sites that we visit, may differ somewhat from the sites described here.