Warmer Seas, Stronger Storms
*by Dr. Melanie Lenart*

Hurricanes can bring lengthy rains into the Southwest, as the remnants of Hurricane Rosa did earlier this month on the Tohono O’odham Nation. Flood risk from Rosa’s leftover rains reportedly led to the evacuation of about a hundred people from the area around Menagers Dam, which threatened to burst into the village of Ali Chuk.

A Category 4 Hurricane at its peak, Rosa was one of several storms this summer that underwent “rapid intensification” as it fueled up on overheated seawater. Overheated seas also caused the rapid intensification of Hurricanes Florence, Michael and Maria.

This past summer, I had a chance to get back again to Puerto Rico, a Caribbean island I called home for many years during the 1990s. Seeing the ongoing recovery from last year’s Hurricane Maria brought to mind what a difference 30 years can make now that climate change has kicked into high gear.

The rains from remnant Rosa were risky here in the Southwest. The two Category 3 hurricanes I weathered in Puerto Rico were dangerous. But the wind and rains from Maria, which hit Puerto Rico at nearly Category 5 status, were treacherous. As Puerto Rican officials finally acknowledged in August, Hurricane Maria and its horrendous aftermath led to the deaths there of nearly 3,000 people.

Is there a link to climate change? Well, hurricanes intensify when crossing warm water, if other factors don’t counteract it. The ongoing climate change is certainly warming ocean waters, as several research projects have shown in the past couple of years. It turns out the oceans are absorbing the majority of the excess heat trapped on our planet due to the extra blanket of pollution from the burning of oil, gas and coal. So climate change is heating up the ocean.

Given the link between ocean heat and hurricane power, we may be in for a bumpy ride. Blessings to those dealing with damage from hurricanes and their remnants, and let’s give thanks that Arizona is out of the range of full-blown hurricanes. The remnants are challenging enough.

*Dr. Melanie Lenart is a faculty member of Tohono O’odham Community College, teaching science and agriculture. For more background on the connection between climate change, warm seas and hurricane power, go see the complementary chapter detailing it from her book “Life in the Hothouse: How a Living Planet Survives Climate Change: https://www.melaniemlenart.com/our-living-planet.*
National Native American Heritage Month and Studies in Indigenous Borderlands (SIB)

In recognition of the importance of November 2018 as the National Native American Heritage Month and to promote further the Studies in Indigenous Borderlands (SIB), several guest speakers will present on topics that relate to Native Americans (or Indigenous peoples) in various zones of “borderlands.” These scholars range from the biological sciences to environmental planning to art history.

For example, Dr. Adrian Quijada’s guest speakers Ms. Andrea Carmen, The International Indian Treaty Council (IITC) Executive Director, and Ms. Amy Juan, Tohono O’odham Nation, and IITC’s Tucson Office Manager, will present on environmental-related issues as it pertains to the U.S.-México borderlands (November 7th and 21st, respectively, both at 12:00-1:00 p.m. in Gewkdag Son Ki: Meeting Room 4).

Similarly, Mr. Harold Thomas from the Sonoran Institute will present on environmental planning within the U.S.-México borderlands and its environmental implications within this region and what this may mean for Indigenous groups (November 14th, 12:00-1:00 p.m., Gewkdag Son Ki: Meeting Room 4).

In addition, an affiliated guest speaker, Mr. Wilfred Topkok (Inupiaq and Wales) from Teller, Alaska, will be discussing his experiences in the Russia-United States borderlands (November 19th, 2:15-3:30 p.m., Gewkdag Son Ki: Meeting Rooms 1 and 2).

The last guest speaker will be Dr. Sarah Moore from The University of Arizona’s School of Art. Dr. Moore will present on United States frontier representations from the nineteenth century and their ideological implications for the “borderlands” (November 28th, 12:00-1:00 p.m., Gewkdag Son Ki: Meeting Room 4).

Through these guest presentations from various experts, Drs. Cassadore (literature and humanities faculty) and Quijada (biological sciences faculty) and Ms. Linda Chappel (art faculty) want to emphasize and highlight not only the socio-cultural importance of November as National Native American Heritage Month, but they also want to emphasize the critical importance and value in intellectual engagement in the larger, societal context in the Studies in Indigenous Borderlands (SIB) degrees, the sciences, the arts, and the humanities for all members of the college community in order “…to enhance the Nation’s participation in the local, state, national, and global communities” (Tohono O’odham Community College Vision Statement).

Location: Gewkdag Son Ki: Building Meeting Rooms
(see above details),
Main Campus, Tohono O’odham Community College
Talk Addresses the Question “Who Are the Sobaipuri O’odham?”

Submitted by Martha S. Lee

On September 26, 2018, as part of TOCC’s weeklong O’odham Taṣ celebration, three guests from San Xavier District gave a presentation about the Sobaipuri O’odham of Wa:k. The guests were introduced by Retention Coordinator Ronald Felix, who is on the college’s Himdag Committee and is an active member of the Wa:k (San Xavier) community. The guests were:

- Tony Burrell, Wa:k (San Xavier) District Council Member and Elder
- David Tenario, Assistant Supervisor, Natural Resources Office, Wa:k District
- Deni Seymour, Ph.D., Anthropologist & Ethnohistorian for the Sobaipuri O’odham Heritage Research Project

The presentation started with a 7-minute video called *Who Are the Sobaipuri O’odham?* which is available on YouTube in both English and Spanish. Then the three speakers took turns presenting history about the Sobaipuri O’odham. Here are a few of the highlights:

- Sobaipuri O’odham are River O’odham. Traditionally, they lived on riverbanks year-round.
- The Sobaipuri were agricultural and irrigated their fields with river water. They lived in planned villages with rows of houses in pairs.
- The Sobaipuri O’odham relied on riverside trees for shade; they did not construct wapto.
- They traded crops for salt and did not make regular journeys to the sea.
- The March 14, 1930 *Tucson Citizen* newspaper said that Toribio Aragon, the last of the Sobaipuri, was “laid to rest.” In fact, Mr. Aragon and other Sobaipuri O’odham of that time had descendants.
- Many current residents of Wa:k consider themselves Sobaipuri O’odham.

Mr. Tenario closed the talk by describing the beautiful riparian area that San Xavier District maintains on the Santa Cruz River. Those interested in visiting may inquire with the Wa:k District Natural Resources Office.
Youth Agriculture Day — October 18, 2018
San Xavier Cooperative Farm hosted the Fall 2018 Youth Agriculture Day for the Farm and Food Working Group (FFWG), which is associated with TOCC. Dozens of students from Baboquivari High School, San Xavier Middle School and other local schools serving Tohono O’odham students enjoyed the all-day event on September 21, which ended with a healthy lunch. Food items included:

- Delicious soup made from the drought-hardy tepary beans that have been cultivated by the O’odham for thousands of years;
- coleslaw from cabbage grown at the farm and vitamin-packed *ciolim* harvested from cholla plants; and
- a cookie made in part from the mesquite pods ground into a nutritious and naturally sweet flour, a delicacy passed down from the ancient O’odham.

The event featured six half-hour activities that groups of students funneled through. They are described below, with pictures to show some of them.

**Seed Saving.** Directors of the Ajo Center for Sustainable Agriculture explained to students how tepary bean seeds have emerged as the most drought-tolerant bean in the world thanks to cultivation practices by the O’odham and other Southwest tribes dealing with dry conditions. Students also had a chance to do a taste test of two different types of pomegranate that have been grown on O’odham lands for hundreds of years.

**Soil and vegetation.** In this exhibit, students could see for themselves how water flowing over vegetated soil comes out cleaner than water draining from bare soil. The exhibit by the U.S. Department of Agriculture and Natural Resource Conservation Service also compared how much water drained through the soil rather than running off the soil, showing that once again soil covered with plants fared better.

**Hay ride.** In this hay ride on a trailer bed, students got to see just how large the 900-acre farm is, and some of the crops grown on site. SXCF workers introduced them to the expanded planting site for tepary beans, squash, corn and other traditional crops. Although the crop lines stretch back for thousands of years, farm managers had to experiment to grow these ancient crops under the relatively new technology of pivot irrigation. In general, these systems are used only to grow grasses and grains, such as alfalfa and wheat. Students also saw the huge compost piles managed onsite by the University of Arizona’s Compost Cats.

**Compost.** Compost Cats workers provided a smaller demonstration of how leftover food items can be made into compost that can fertilize soil for growing crops.

**Prickly Pear Workshop (ihbhai).** Students enjoyed prickly pear lemonade after processing this tasty fruit.

Youth Agriculture Day, organized by the Farm and Food Working Group, has been an annual event since 2011. This is the first year the FFWG decided to offer the event twice during the academic year. This fall event was held at the San Xavier Cooperative Farm and the upcoming spring event will be held at Tohono O’odham Community College.