

- [Home](#)
- [About »](#)
- [Contact Us](#)
- [Archives](#)
- [Jewish Community Directory](#)

Enter search keyword

Search 

San

Diego Jewish World There's a Jewish Story Everywhere

- [Anachnu](#)
- [Books & Poetry](#)
- [International »](#)
- [Jewish History](#)
- [Jewish Religion](#)
- [Lighter Side](#)
- [Middle East](#)
- [Music and Visual Arts](#)
- [Obituaries & memorials](#)
- [Readers' Stories](#)
- [San Diego County »](#)
- [Science, Medicine, Education](#)
- [SDJW Writers & Photographers »](#)
- [Side Panel Offers](#)
- [Sports & Competitions](#)
- [Spotlight](#)
- [The World We Share](#)
- [Theatre, Film & Broadcast](#)
- [Travel, Cuisine, & Miscellaneous](#)
- [USA](#)
- [Videos](#)

Categorized | [Harrison Donald H](#), [International](#), [Science, Medicine, Education](#), [Travel, Cuisine, & Miscellaneous](#)

Moorea, land of Moana and UC field studies

Posted on 13 September 2018.

Rotui is a sacred mountain in Polynesian belief

Follow

Editor's Note: This is the 28th in a series of stories researched during Don and Nancy Harrison's 50th Wedding Annivers
Previous installments of the series, which runs every Thursday, may be found by tapping the number of the installment:
[16](#), [17](#), [18](#), [19](#), [20](#), [21](#), [22](#), [23](#), [24](#), [25](#), [26](#), [27](#)

Follow this blog

alia, to San Diego.
[11](#), [12](#), [13](#), [14](#), [15](#),

Email address

ex: someone@mydoma

Subscribe me!

By Donald H. Harrison

Donald H. Harrison

Hinano Teavai-Murphy

MOOREA, French Polynesia – Hinano Teavai-Murphy leads us to a corner of a ceremonial outdoor gathering place known as a marae and points out that one of its corners lines up exactly with the peak of Rotui, a sacred mountain for the Polynesian people. Rotui looks strikingly similar to the landform depicted in the animated Disney feature, Moana, on which Teavai-Murphy was credited as a cultural consultant. In November of every year, she explained to my wife Nancy and me, the constellation Pleiades, also known as the Seven Sisters, rises directly above that peak. When it does, the people of Moorea traditionally celebrated a New Year.

Because of their tenacity and long lives, sea turtles occupy a special place in traditional Polynesian New Year's celebrations, Teavai-Murphy instructed us. Today, there is a ban on eating turtles, but in the past "when they killed a turtle, there was a ritual. You'd get together, share together, and on this tiny island, where everyone knows what you are doing, and people sometimes fight about land or resources, capturing a turtle was a time to forgive, and to share." Today, she commented, Polynesians are unsure how to replace that ritual. "We eat fish every day," she said. "How can we solve the problem? How can we replace this practice?"

This is just one example of the interrelationship between the physical environment and human culture. Today, at the University of California at Berkeley-administered Richard B. Gump South Pacific Research Station, where Teavai-Murphy serves as the associate director for administration and outreach, an ambitious project is underway to understand the 51-square-mile island of Moorea, with its population of 17,000 people and a variety of ecological zones, as a single system. Neil Davies, the British born-and-educated director of the Gump Station, explains: "If you think of Moorea as a fruit fly, or as a human, it is the same question as we ask in medicine: How to you respond to being exposed to different kinds of environmental stimuli? ... If I live this type of life style with this much sun, exposed to these kinds of chemicals, or eat this sort of diet, what is the prognosis for my health?"

Follow

Follow this blog

Email address

ex: someone@mydomain

Subscribe me!

Neil Davies

“We have the same thing with ecosystems,” Davies continued. “Moorea may be exposed to higher temperatures. When the temperature goes up a degree, how will Moorea respond? Will its reefs bleach and die? Will they be taken over by algae? Will we have an algal reef instead of a coral reef? Will that affect the economy of the island? It may not be good for tourism. It may not supply as much food for the locals. We try to make those kind of predictions. ... We are pretty sure that the ocean will become more acidic and that temperatures will go up and, frankly, the people of Moorea can’t change that. It is irreversible at this stage. So, what are the consequences of that? What are the things that we can do? What kind of things should we build? The fishery management policies that we have, will they change?”

Davies pointed out that decisions responding to the environment and affecting its future growth are “up to the people and the political system to decide.” Moorea, which is approximately the same geographic size as San Francisco, has a local government on the island, and a regional government in Papeete, which, located on the nearby island of Tahiti, is the capital city of French Polynesia. Beyond that, there is the government of France which reserves to itself the functions of defense, security, justice, and university education. More remote in the decision-making chain are the European Union and the United Nations.

The Gump Station was donated in 1981 for research to the University of California system by Richard B. Gump of the Jewish family that operated Gump’s, which is self-described as “the legendary San Francisco destination for luxury gifts, jewelry, artful objects and home decor.” Davies has served in Moorea as director of the Gump Station since the Year 2000, with one of his major accomplishments being the leadership of a four-year Biocode project to identify and genetically sequence every macroscopic species of animal and plant on the island of Moorea. Currently, between 7,000 and 8,000 species have been identified. “The goal,” he said, “is to get specimens – one or two for each species. Once they are deposited in a museum and we have photos of each of them, we sequence their genes. We tag every species, so that we have these markers and they are in the system, and you can find it again.”

As lead investigator for the project, Davies coordinated the work of “teams from all over the world who came to Moorea and it was kind of like a big scavenger hunt – specialists in each taxonomic group—and they were challenged to find all the species in their group, wherever it was that they thought they might find them.” The samples were sent to several museums around the world, “depending on who led the taxonomic group,” Davies said. “For example, the French team led the fish study, so they have one of each specimen in Paris, another at the Smithsonian in Washington, D.C. All the specimens in these international museums are databased and accessible to scholars around the world as part of this global network.”

Today, the Gump Station also is base camp for student projects, both at the graduate and undergraduate level, from such University of California campuses as Berkeley, Los Angeles, Santa Barbara, and San Diego.

Daniel Blumstein

On the day in February 2018 that we visited, undergraduates from UCLA, working in groups of three, were completing month-long projects under the tutelage of Profs. Peggy Fong and Dan Blumstein, the latter a member of the Jewish community. “Peggy’s course broadly is marine biology, mine is animal behavior,” Blumstein told us. Fifteen UCLA undergraduates take the course, spending 2-3 weeks in California defining their projects before traveling as a group to Moorea to do between three and four weeks of field work. “We’re analyzing data, getting things written up, and for three more weeks students will be giving public talks on their projects and writing papers,” Blumstein said. “A lot of them will be published.”

A type of lizard known as a skink dwells on the island of Moorea, and two questions under investigation by students were how adaptable are the skinks to human proximity, and how do they respond to the sounds made by predators. In the latter study, said Blumstein. “We broadcast to them certain sounds. We see them increasing the rate of looking, and then running.” On the other hand, some sounds do not seem to [Follow](#) ks at all, even though they are novel to them.

In the 13-unit class that he teaches for UC Berkeley students, “we have about two weeks of classroom work on campus, and then we fly down to French Polynesia, where the class continues for nine weeks,” Stillman related. “The first week or so we give the students an intensive tour of the island. We show them all the different types of habitats. We talk about the interesting observations that we can make, and we do some practical exercises like field sampling, and then the students are given some time to think about projects they would like to do. Students have to do projects that are novel, that have never been done before. They have to be feasible within a six-week period of time ... The students work in the field, work in the forest, work on the reef – it depends what the nature of their project is. I think the really interesting thing for us as instructors is to know what we have to be able to

teach. I need to learn what they need to learn. It is really empowering for the students, because they get to figure out what they are going to do, and then actually do it, and the product of the class is a professional paper that they give to the world.

Stillman recalled one student project which was about “the effect of ocean acidification on embryonic sea urchins. Their populations go up and down over time and a lot of it depends on the success of their embryos. If you put a sperm and egg into the water, and they combine in the water to produce the embryos that then develop in the water, or the pH of the water changes, it can affect their development. So, one student, Brent, took all the possible combinations of sperm and egg, and then he crossed the sperm and the egg of different parents together, and raised them. He showed that urchins are extremely sensitive to even slight reductions in pH levels. That was a really nice project. We have tropical urchins, although we do have data for urchins in temperate zones like the ones who live along the California coast.”

Another project involved the partula snail, which is native to French Polynesia. French colonizers had introduced another snail to Polynesia – one favored for eating by those who love escargot. When escargot snails escaped their controlled environment and were loose in the forests of Moorea, they became real pests, “eating all the vegetables and a lot of the forest,” Stillman related. So, the authorities introduced a carnivorous snail which could eat the escargot snail. “But it liked to eat partula snails, which were mostly wiped out. We thought they had gone completely extinct in Moorea until they recently were discovered by the UC Berkeley class a number of years ago.” As one student learned through her project, it turned out that the partula snail had thrived in a clear-cut area.

Another UC Berkeley project involved releasing partula snails that had been raised in captivity in England back into the fields of Moorea. “One of our students was able to monitor those re-released snails and to figure how well they survived after being re-released and how far they moved after being re-released,” Stillman said.

Stillman said that sea urchins and partula snails are both important contributors to Moorea’s environment.

“In healthy systems, the urchins will reduce the amount of algae, which tends to compete with coral. So, on a healthy coral reef there is an abundance of grazers, with the urchins grazing down the algae,” Stillman said. “Partula snails in their system graze the leaves and help the plants grow better, because when leaves are covered with epiphytes, it can reduce the photosynthetic performance of the plants.”

*
Harrison is editor of San Diego Jewish World. He may be contacted via donald.harrison@sdjewishworld.com

[← Kol Nidre is not a prayer](#)
[‘Just Kidding’: AI Chet additions from the White House →](#)

Leave a Reply

Your email address will not be published. Required fields are marked *

Comment

Name *

Email *

Website

3 + 1 =

Post Comment

This site uses Akismet to reduce spam. [Learn how your comment data is processed.](#)

Please help us defray the costs of providing this free service with your non-tax-deductible contribution in any amount



Subscribe by Email

Get a Daily Digest of The Latest News

Email address

ex: someone@mydomain.com

Most recent 100 posts

Follow this blog

Email address

ex: someone@mydomain

Subscribe me!

- [Editor's E-Mail Box: September 13, 2018 \(3 items\)](#) September 13, 2018
- ['Just Kidding': Al Chet additions from the White House](#) September 13, 2018
- [Moorea, land of Moana and UC field studies](#) September 13, 2018
- [Kol Nidre is not a prayer](#) September 13, 2018
- [Editor's E-Mail Box: September 12, 2018 \(4 items\)](#) September 12, 2018
- [Rereading Leon Uris's 'Exodus'](#) September 11, 2018
- [Dip Your Apple ~ The Fountainheads](#) September 11, 2018
- [AJWS endorses global campaign to save the forests](#) September 11, 2018
- [Palestinian Refugee-ism must end](#) September 11, 2018
- [Humoring the headlines: September 11, 2018](#) September 11, 2018
- [U.S. closes P.L.O office in Washington](#) September 11, 2018
- [Decision- making chaotic in U.S., calculated in Israel](#) September 11, 2018
- [Pick of the Litter: A Canine Lover's Treat](#) September 10, 2018
- [Jewish trivia quiz: Unetaneh Tokef](#) September 9, 2018
- [How religious are Israeli Jews?](#) September 9, 2018
- [Hineni ~ Cantor Moshe Oysher](#) September 8, 2018
- [The composer behind Streisand's 'Avinu Malkaynu'](#) September 8, 2018
- [In memory of Neil Simon and his BB trilogy](#) September 7, 2018
- [Quieting our minds in unquiet times](#) September 7, 2018
- [Home again in Israel](#) September 7, 2018
- [Israel in global Jewish tradition and thought](#) September 6, 2018
- [Editor's E-Mail Box: September 6, 2018](#) September 6, 2018
- [Humoring the headlines: September 6, 2018](#) September 6, 2018
- [Science v. Religion, a.k.a Feynman v. Wouk](#) September 6, 2018
- [Recalling the WWII Seabees on Bora Bora](#) September 6, 2018
- [Barbra Streisand: Avinu Malkenu & People](#) September 5, 2018
- [Palestine: a house divided against itself](#) September 5, 2018
- [Editor's E-Mail Box: September 5, 2018 \(9 items\)](#) September 5, 2018
- [Cantor Hanan Leberman ~ Romeo and Juliet](#) September 4, 2018
- [Emory U. to host weekend Israel learning for teens](#) September 4, 2018
- [Sandi Masori: One Woman, Many Hats](#) September 4, 2018
- [At 75, Judy is our birthday card queen](#) September 4, 2018
- ['Just Kidding': Juvenile Trump was Shabbos Goy](#) September 4, 2018
- [Editor's E-Mail Box: September 4, 2018 \(6 items\)](#) September 4, 2018
- [A spiritual novel with a mystery, or vice versa?](#) September 4, 2018
- [Timeless Chanukah story set in 1912 New York City](#) September 4, 2018
- [Jewish trivia quiz: John McCain, RIP](#) September 3, 2018
- [Editor's E-Mail Box: September 3, 2018 \(2 items\)](#) September 3, 2018
- [Marker placed in Kansas for August Bondi](#) September 3, 2018
- [Is your Settlement House Cook Book inscribed?](#) September 3, 2018
- [Israeli politicians, law enforcers shaking off lethargy](#) September 3, 2018
- [Novel shines a light on Soviet WWII decision- making](#) September 2, 2018
- [One-man play tackles depression, suicide](#) September 1, 2018
- [Another missed opportunity for Jerusalem Arabs](#) September 1, 2018
- [A brief history of Zionism](#) September 1, 2018
- [Humoring the headlines: August 31, 2018](#) August 31, 2018
- [Editor's E-Mail Box: August 31, 2018 \(3 items\)](#) August 31, 2018
- [Neil Simon takes a final bow](#) August 30, 2018
- [Editor's E-Mail Box: August 30, 2018 \(3 items\)](#) August 30, 2018
- [Initiative links Jewish teens to service, scholarships](#) August 30, 2018
- [Maasdam's captain emphasizes teamwork at sea](#) August 30, 2018
- [Rabbi Samuel introduces Philo to the modern world](#) August 29, 2018
- [Editor's E-Mail Box: August 29, 2018 \(3 items\)](#) August 29, 2018
- [Taking an axe to the Mideast 'peace process'](#) August 29, 2018
- [APN leader rages at those who ignore their hearts](#) August 29, 2018
- [Continuing Education to fund more students](#) August 28, 2018
- [Editor's E-Mail Box: August 28, 2018 \(5 items\)](#) August 28, 2018
- [Jewish groups disturbed by U.S. - Mexico border visit](#) August 28, 2018
- [Humoring the headlines: August 28, 2018](#) August 28, 2018
- [Not a good year for the Cohen name](#) August 28, 2018
- [Holocaust Survivors hold a reunion in San Diego](#) August 27, 2018
- [Binational Sukkot fete planned Sept. 26 at Tifereth Israel](#) August 27, 2018
- [Cantor scores well in 'The Voice' of Israel](#) August 27, 2018
- [Humor, or should we say levi-tea, in pottery](#) August 27, 2018
- [Recently published 'The Israel Bible' tells in over 2,000 pages the Jewish connections to Israel](#) August 27, 2018
- [Editor's E-Mail Box: August 27, 2018 \(3 items\)](#) August 27, 2018
- [Seacrest Foundation salutes 211 Club patrons](#) August 27, 2018
- [We need to challenge our brains to be more civilized](#) August 27, 2018
- [Jewish trivia quiz: Mayim Bialik](#) August 27, 2018
- [Hadassah hears of Gaza danger, Jerusalem life- saving](#) August 27, 2018
- [Stories of the Hear and Now](#) August 27, 2018

Follow

- [Watching politicians in U.S. and Israel](#) August 27, 2018
- [Jewish thugs beat up Arabs, photos](#) August 27, 2018
- [Adon HaSelichot](#) August 26, 2018
- [Pondering in 'Librarian' where truth ends, fiction begins](#) August 26, 2018
- [A Jabotinsky Zionist reply To Ronald Lauder](#) August 26, 2018
- [S.D. Symphony fans rhapsodize over Gershwin concert](#) August 25, 2018
- [Jewish groups, others mourn passing of John McCain](#) August 25, 2018
- ['Davi's Way' relates story of a botched tribute to Sinatra](#) August 25, 2018
- [Why is Israel losing American Jews?](#) August 25, 2018
- [Humoring the headlines:](#) August 24, 2018 August 24, 2018
- [Will High Holy Day Rimon soon be grown in Florida?](#) August 24, 2018
- [Viterbi, honoring father, donates \\$50 million to UCSD](#) August 23, 2018
- [Editor's E-Mail Box: August 23, 2018 \(2 items\)](#) August 23, 2018
- [For others it's DIY, for her it's Do- It- Themselves](#) August 23, 2018
- [Tonga's love for the Jews of the Bible](#) August 23, 2018
- [Cantors' Concert – Adon Olam Medley](#) August 22, 2018
- [Chesler's memoir insightful into feminist movement](#) August 22, 2018
- [Editor's E-Mail Box: August 22, 2018 \(3 items\)](#) August 22, 2018
- [Three cantors in Amsterdam ~ Tum Balalaika](#) August 21, 2018
- [30 gathered to salute Jerry Joe Seller on his 90th](#) August 21, 2018
- [Contrasting legal outcomes for Reps. Davis and Hunter](#) August 21, 2018
- ['Nana': A thorough doc. film of a Holocaust survivor](#) August 21, 2018
- ['Just Kidding:' Trump tries to manage his anger](#) August 21, 2018
- [Editor's E-Mail Box: August 21, 2018 \(3 items\)](#) August 21, 2018
- [IsraAID dispatches team to flood stricken Kerala](#) August 21, 2018
- [Christians teach Torah to Jews in Ariel](#) August 21, 2018
- ['Dark Money' going far and wide](#) August 21, 2018
- [NYU action awaited on boycott against Jewish students](#) August 21, 2018
- [Tonge- lashing from a British anti- Semite](#) August 20, 2018

Follow this blog

Email address

ex: someone@mydomain

Subscribe me!

© 2018 San Diego Jewish World. Powered by [WordPress](#).

Gazette Theme by  WOOTHemes

Follow