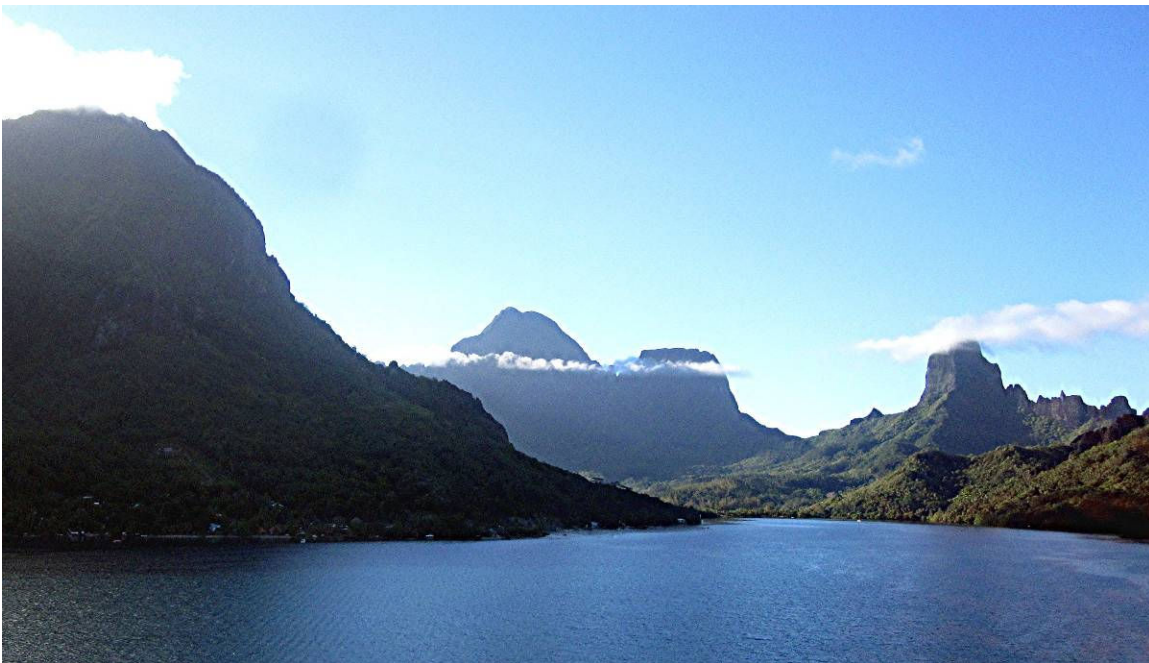


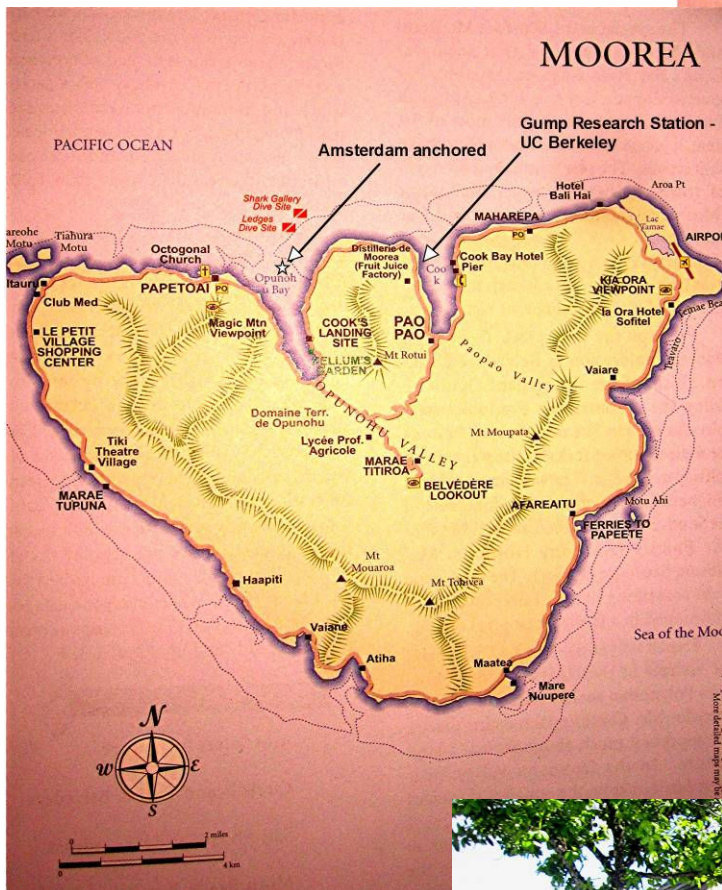
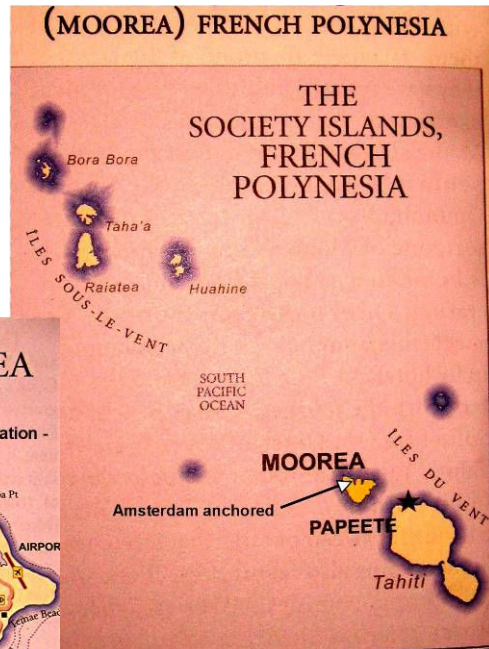
Day 15–Moorea, Society Islands-Land Tour-Gumf Research Center-10 Oct 09: The day started with fine weather as the Amsterdam left the dock at Papeete, Tahiti and headed for Moorea. The island of Moorea, is in the Society Islands group of French Polynesia. It is located about 10 miles northwest of Tahiti so it didn't take long to get there. Here is how the island looked as we approached. The prominent sharp peak to the right of center shows up in many of subsequent photos taken as we toured the island.



By 7am we were pulling into Opunohu Bay, on the north coast of Moorea and got this marvelous view shown below. The phrase “Tropical Paradise comes to mind”.



The Amsterdam dropped anchor in the bay and the tender boats were lowered so we could be taken to shore. The maps below show where the Amsterdam was located and some of the sites we visited later on a land tour.



We were signed up for a tour by Frank called “Moorea Nature & Culture” (\$90 USD pp). The tour had been organized by Karen (bksunbuddies) and Pauline (hallpaul). About 25 people on the tour met in the Explorers’s Lounge at 8am and then Bruce, the Cruise Director, came by

and led us down to the tender boat on the A deck. After about a 15 minute ride our tender brought us to the dock in the little village of Papetoai on Moorea. Here on the right is some of our tour group as we landed in Papetoai (L to R: Neville & Bonnie, white & blue shirts respectively and Karen, pink shirt).



We threaded our way through the gauntlet of tourist trinket booths that had been set up. Barbara couldn't be happier with this kind of arrangement.

There was a collection of open air trucks in the parking lot that were collecting the people who had signed up for the Holland America tours on the island.



Our group met up with Frank and boarded the air conditioned bus that he had advertized. Barbara went on board and took a seat by the window.

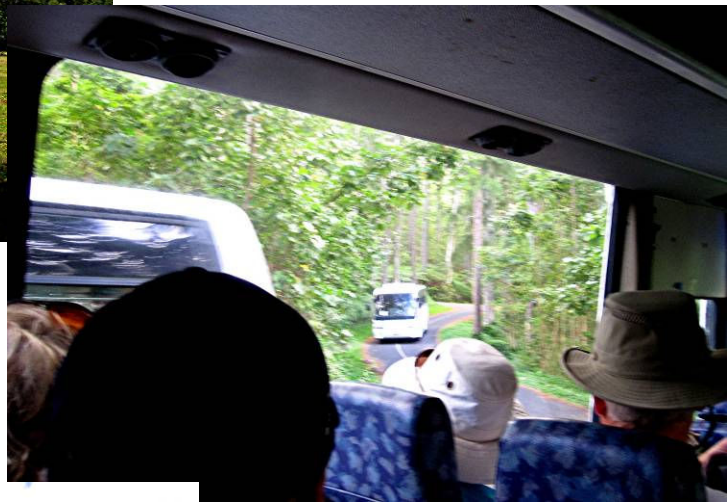


Using the map of Moorea shown above, here is the itinerary for the half day tour that was planned. We would first go through the Opunohu Valley and take the road up to the Belvedere Lookout. Then we would retrace our route down the mountain a bit to the Marae Titroa archeological site. From there the bus would take us through Pao Pao and the farming area of Paopao Valley. We would then proceed along the west side of Cook's Bay and stop for a tour of the facilities at the Gump Research Center which is managed by the University of California, Berkeley. From there we would return along the coast to the tender boat landing at Papetoai.

As expected, the scenery was spectacular on the way up to the Belvedere Lookout. This photo of Mount Rotui illustrates the point.



The road up to the Belvedere Lookout was quite narrow and there was some skilled jockeying by our driver to allow two-way traffic on this busy tour day in Moorea. We took this photo through the bus window to try and illustrate the conditions as two busses came downhill towards us.



Once at the Belvedere Lookout spot we had a look around from this high elevation.



Frank pointed out the significant geological sites that were visible. Here is the view of Mount Rotui which is about 900 meters (2953 feet) high.

The island was formed by a volcano about 2.5 million years ago. With the abundant rainfall and porous lava rock erosion is significant. All that is left of the huge volcano are the few mountain peaks and steep valleys leading to the sea.

From this site we could see the Amsterdam anchored in Opunohu Bay below. Where ever we looked there was awe inspiring beauty. It was everything that we had hoped to see in a South Pacific Island.



Our guide, Frank, was in the midst of graduate school study when he first came to Moorea. He fell in love with the island and ended up taking a job with the University of California running the Research Center down on Cook's Bay. He still works part time for the Research Center. It was obvious that he really cared for this island and its people. Here, on the right is a picture of Frank.



In his ideal world the Opunohu Valley would be returned to its natural state of 200 years ago but he realizes that will not be possible. He pointed out that, against his wishes, there were cleared patches of land in the valley where farmers were starting to grow pineapples. In addition there are hundreds of imported plants and pest animals that have changed the island forever.

At this point Frank became a bit philosophical and related some history about what had happened in this valley and throughout Polynesia when the Europeans started to arrive in large numbers back in the mid 1800's. He said at that time there were about 30,000 Polynesians on the island and their numbers had grown over the years because there were no fatal diseases. Even malaria was not present on these islands as it is in islands to the south. As foreigners arrived they brought diseases that were common in Europe, for example, measles, smallpox, and diphtheria. These diseases were usually not fatal to Europeans who benefitted from natural immunities that built up over many generations

exposed to those diseases. However, the Polynesians were not immune to the diseases and they died by the thousands as disease swept through Polynesia. The population of Moorea dropped from 30,000 to about 3000 in a short period of time as many died. The Christian religion reaped an unintended benefit from this event. The natives observed that the Christian missionaries and other Europeans were not dying from disease while the Polynesians, worshipping their traditional Gods, were dropping like flies. Obviously, the Christian God was more powerful so the Polynesians adopted Christianity in large numbers. The Polynesian religion, which bordered on ancestor worship using Tikis and the large stone temple platforms called Marae, was largely abandoned. With that bit of background we set out for the next destination of our tour which was one of the ancient Marae worship sites.

We rode a short distance down the mountain to a site called Marae Titiroa. We walked into the forest where there was a stone wall about 4 feet high and 3 feet across. This was a place of worship, called a Marae, that was sacred to the ancient Polynesians. A picture of the Marae, which has been restored by archeologists, is shown in these pictures.



Some chickens on the Marae didn't seem to notice these noisy foreigners visiting the site.



Frank led us deeper into the forest where we came upon a second Marae made in a different style. These stones had been hand carved into a rounded shape that represented the head of a turtle. Thousands of these stones were then stacked to create a Marae platform with a raised portion at one end. Clearly this was different from the first Marae we visited and Frank said they were created at different times as the religious practices changed. Here is a picture of this second Marae that we visited.



As we walked back to the bus through the forest we had become fascinated by the large fluted growths on the trunks of most of the trees. Here we try to give a sense of the size of the growths in this picture.



These are apparently Mape trees.

Near where the bus was parked was a sign asking that we not damage the Mape trees which Moorea officials are trying to preserve. The request that we “Stop hammering mape trees.” brought a smile to our lips as we complied.



Before we left the Marae site Orlin had to take a picture of the drinking water reservoir serving the surrounding area.

We had noticed a 4 inch diameter black plastic pipe running through the forest and we finally could see that it ended at these large concrete tanks. Frank said the water was collected from a spring higher up on the mountain. The surrounding communities were supplied with water courtesy of gravity feed from these tanks, shown on the right. Mount Rotui forms a beautiful backdrop for this mundane facility.



We left the site of the Marae and proceeded with our tour of Moorea. The bus ride took us the rest of the way down the mountain where we turned right onto the road leading to the Paopao Valley. This valley has been much more developed for farming than the Opunohu Valley that Frank would like to preserve. The main crop here is pineapple that is claimed to be sweeter and less acid than the pineapple grown in Hawaii. Here is a picture of some farms along the road. Mount Moupata is the cloud covered peak in the background.



When the bus arrived at the village of Pao Pao we turned left and took the road along the west side of Cooks Bay. Near the mouth of Cooks Bay we stopped at what Frank described as an Outreach Project run by the Gump Research Center. Local adults with a knowledge of ancient Polynesian farming and building craft are hired to help design and build vegetable gardens, buildings and boats that replicate such things that existed in ancient times on Moorea. Teenagers are also employed in the actual construction of the buildings and gardening.



Here, on the right, is a picture of garden which contained sweet potato and taro plants that the ancient Polynesians brought to Moorea.

The garden even had a weather station which, Steve (back home in Tennessee), would be pleased to see.



Some taro plants are growing at the base of the support structure.

There was a building project underway to construct a shelter using only the building materials available to the original Polynesians. Some young people were busy tying the poles together to make the roof.



On the subject of roofs, we observed plastic artificial palm leaf material being used for the roof of a restaurant in Nuku Hiva a few days ago (Day 12). Plastic is a great modern material but these guys were getting set to use the original Polynesian roof material made from the leaf of the **pandanus tree**.

The Polynesians used the leaf from the pandanus tree to make all sorts of things including the roofs of houses. The pandanus tree leaf is very fibrous and strong. In addition to roofs it can be used to weave hats and baskets and the early Polynesians even used the pandanus leaf to weave sails for their double hulled voyaging canoes. Here, on the right, is what a pandanus tree looks like as it grows in Moorea.



The leaves are taken from the tree and dried. They are then carefully bent double around a stick and packed close together. Starting at the eaves, the sticks are then attached across the roof poles leading to the peak of the roof. Here, on the left, is what the assembly looks like from underneath.

Near the construction site we found a stack of pandanus wrapped sticks, ready for attachment to the roof poles. The assembled packs of leaves are shown on the right. The sticks around which the leaves are bent are clearly visible on the right in the top layer of leaf bundles.



The ancient Polynesians obviously knew what they were doing and they didn't rely on plastic petroleum products to keep the rain off their heads. We appreciated what was going on at the Outreach Center in preserving the old traditions.

So much for ancient roofing. Now it was time to move on to the Gump Research Center which was down the road a mile or so. However, before we leave we have to mention a fun thing that they have done at the Outreach Center. Frank's wife had this idea and they carried it out. The

idea was to attract attention to the fact that the Outreach Center exists in the community by doing something different. What they did was plant two palm trees upside down. Of course, the trees won't grow but Frank said they have attracted a lot of attention from the cars driving by on the nearby highway. This photo on the right says it all!



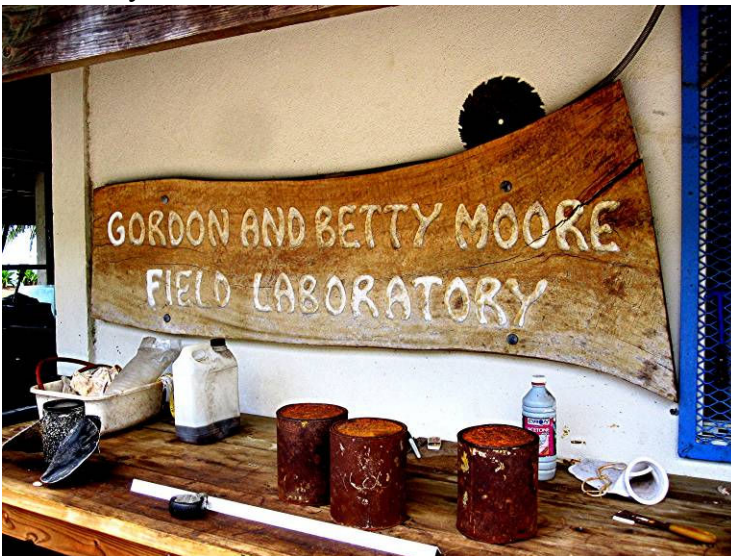
Regarding the Gump Research Center, Frank explained that the Gump family, of the San Francisco Gump Department Store fame, has donated a large amount of money over the years to build and maintain the Research Center which is managed by the University of California, Berkeley. In addition to the Gump money and a small amount from the University of California there is also major financial support from the Gordon and Betty Moore Foundation. Gordon Moore is one of the founders of Intel and is the originator of "Moore's Law" which predicted the phenomenal rate of increase in the capability of

computer chips to process data. The Research Center accepts undergraduate students who work in the oceanographic field laboratory on projects to further understanding and preservation of the ocean environment, plants and animals. They also have programs for graduate students and professors in academic studies regarding oceanographic issues.

Across a broad yard we could see an array of large plastic tubs. Inside the tubs were oysters and coral samples being studied under controlled conditions.



Around the corner of a building we found the Field Laboratory.



Recruiting noted academic people to come and work at the Research Center is no-doubt aided immensely by the fact that it is located in such a beautiful spot on earth. For example, a professor and family might be able to occupy this nice home on a hill overlooking Cook's Bay during an assignment.



For the less noted students there is a dormitory provided at the site as shown here.



We finished our tour of the Gump Research Center and the bus took us back to the visitor's center in Papetoai. There, by good fortune we found a sign where Barbara could get a picture showing that her library card had visited in Moorea.



It was necessary for us to pass through the souvenir booth area on our way to the tender and we did end up buying a couple of inexpensive pieces of pearl jewelry as a memento. As per our tradition we got a picture of the craftsman. This time we got a bonus of him holding his little child.



We finished the day off by attending the show put on by the Amsterdam Singers and Dancers in the Queen's Lounge. It was one of their best shows and we enjoyed the whole thing.

The ship got underway for Bora Bora before dark and we expect to arrive there by 7am tomorrow. We were there two years ago and look forward to visiting that beautiful island again.