

2014-16-05 PT. 1

John Kelly

March 11, 2015

Rasmuson Library at the University of Alaska in Fairbanks, Alaska

Karen Brewster, interviewer

Series: University of Alaska 100th Anniversary tapes

John Kelley said he is Professor Emeritus of marine science. Karen Brewster asked him about his personal background. Kelley said he was born in Philadelphia in 1933. He was raised in the Philadelphia area and the suburbs. His sister moved out to California and raised a family. He moved out to the University of Washington after serving in the Army. He met his wife at the University of Alaska. She was also a flight attendant for Wien Airlines. They have been together since 1970. He said his family was one of inquiry. He had several mentors at school and in his neighborhood. He attended school at LaSalle College. Under the GI bill he finished in geophysics and geochemistry. He worked for a while make money to continue his education. He went to the University of Washington to study meteorology and oceanography and engineering. He has a wide background. He was in the Army in the 1950s. He wanted to study science while he was in the Army and ended up in Arkansas and worked in the chemical laboratory associated with the hospital. He was able to leave the service early and went to Penn State to finish his college degree. He joined the College of Earth and Mineral Sciences. He has served on their alumni board. Brewster asked him why he went into geophysics and geochemistry. Kelley said as a child he always collected minerals and was fascinated with how they got there and the Earth itself. He was in Alpha Nu at Penn State which was an honorary astronomy society out of the department of physics. He eventually became president of the society. He was still interested in astronomy. He later specialized. He said the next part of his life was serendipity. After graduation he started looking for a job and he knew he needed to go back to graduate school. He knew the International Polar Year was in progress at the time in 1957. He was working for American Stores. He worked in the chemistry laboratory. He turned down a position with the Office of Naval Research. He sent out a couple of letters. He learned that Dr. Dave Keeling was doing work on carbon dioxide. He wrote Keeling about his interest in carbon dioxide. Keeling suggested that he go to Antarctica and started to pursue that. Kelley saw an article by Admiral Charles Thomas. He was going to start "Project Husky" named after the University of Washington mascot at Pt. Barrow. Kelley decided to talk with Thomas. He described Thomas. Kelley was invited to go to Barrow. The military was a major source of transportation into these remote spaces. He had to have orders. Thomas just had Kelley travel under his orders. This was in 1959. He got into a bit of trouble when he tried to pass as Thomas, but made it up to Elmendorf. He stayed at Ladd Field. It was the first time he saw the aurora. He then flew to Barrow on a C-47 with Wien. It was a cargo flight. The pilots were experts. He met his future wife who was the airline stewardess. At Barrow he met Otto Geist. Geist took him to a lab and told him he needed clothing which was from WWII surplus. He wanted to meet Max Brewer. Geist told him to take some bones up to the airplane. The pilot was irate about carrying the extra

cargo. Kelley described Geist. They loaded the airplane with the bones. He was able to meet Max Brewer. He talked about Brewer. Kelley said the lab was called ARL. Brewster asked what was Project Husky. Kelley said it was a micro-meteorological project. It was to study the mass and momentum transfer across Arctic waters and land. His job was to build that station. He said it was difficult working in the Arctic. Kelley said Dave Keeling was interested in looking at carbon dioxide variation in the Arctic atmosphere. There were no measurements. Thomas agreed to it. They weren't worried about where the money was coming from. They had to build their own instrument for measuring. They spent the first year just getting ready and keeping the met station going. He returned to the university in September and they had money from the Office of Naval Research. Dr. Max Britton played a bit part. He was the man behind the money. Kelly went down to Scripts to work with Keeling. He oversaw the construction of the analyzer to measure carbon dioxide. It was going to take a big facility. He said now you can have an instrument that would fit in your hand. Kelley said he had to have a building on skids to be able to relocate. They first visitors to see his facilities were Lowell Thomas, Jr. and Bill Bacon. They made a movie. The micro-meteorological project was on Plover Point. In 1974 there was a huge storm and the fetch was long. The Barrow beach area was pretty much destroyed. The lab was under a lot of water. The new lab had been built and withstood the flooding. They had moved to Niksiruk. There were generators and buildings and they all disappeared. Years later in the 1990s they did a survey of the area and found wires going down into the water. The carbon dioxide station survived. Part of it went into the sea and the electronics were all tethered inside of it. He had funds from the Navy to replace everything with new equipment. They were concerned about being near the beach. They moved the study sites to North Meadow Lake south of Barrow on the beach ridge. They stayed there until 1967. He worked on Project Husky as a job. He eventually got his degree from the University of Nagoya in Japan in 1973. He was also at the University of Alaska as a Professor. He eventually got tenure.

Brewster asked if he was director at NARL. Kelley said he was director in 1976-1980. He was already on faculty at the Institute of Marine Science. Brewster asked him what he was finding in his studies at Barrow. Kelley said they found increases in carbon dioxide and now it has doubled. In those days they weren't concerned about carbon dioxide. Later there was concern about the ozone disappearing. He decided to contact McTaggart Cowling who was looking at surface ozone. Kelley founds funds for study. Seattle was concerned about air pollution and they joined together. They built instruments for studying surface ozone. They could see something happening. Keeling met with NOAA to decide what to do for monitoring. They decided to study the carbon dioxide at Barrow. There was already a USGS station there. They measured carbon dioxide in that area. Much of his work was geared for the international biological program. He measured terrestrial carbon dioxide and micro-meteorological. He became interested in carbon dioxide in the ocean and sea ice. He talked about his different interests. His first paper was in the Journal of Geophysical Research on radio nuclides on Mt. Olympus. He said when Chernobyl happened he went out taking samples and wrote a paper. He has trained Native students in math and science. He talked about his involvement with the training from the beginning of his time in Barrow. Max Brewer had wanted to get into oceanography. They had a vessel built, The Magic, and he described the vessel. Kelley used it to study carbon dioxide in the water. Frank Akpik and Wyman Panik were the boat operators. There were occasional ice breakers coming up to Barrow. They decided to have the high school adopt the old vessel as a project. The vessel was rebuilt.

They used it around the coast. They had the Magic and the Ulumiak which they used for the continental shelf environmental assessment program. The Magic is still on the beach.

Kelley said he met Don Hood at a meeting. Hood saw the papers he was publishing and asked him to join the Institute in 1969. IMS was relatively small. Peter McBrough had just come up. He talked about other faculty. He decided to come up to the university. He was still involved with the carbon dioxide and at Scripts. He was also involved in the international biological program. Brewster asked him how he got involved in marine science. Kelley said he was already studying carbon dioxide in the ocean at that point. He and his wife decided at that time to get married. He had done some minor work during the Hammond administration. Bob Weeden worked for the Hammond election. Kelley said at this time the oil companies were challenged for drilling and there were lawsuits everywhere. The federal government decided there needed to be studies. Dave Norton was involved. They mentioned the Outer Continental Shelf Environmental Assessment Program. Kelley was in Finland at the time. Bob Weeden called him and asked him to take a job as science liaison officer.