

RECOLLECTIONS OF EARLY DAYS IN MARINE BIOLOGY & WATER RESOURCES AT UOG

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I arrived on the UOG campus in 1970 as a new faculty hire with the Marine Laboratory, having had previous research experience on Pacific coral reefs but never having seen Guam. My first temporary “office” was a corner of a teaching lab in the new science building partitioned off by a “wall” of cardboard. Marine biology was then still part of the Division of Biosciences and Marine Studies but was soon established as a separate program largely through the efforts of Dr. Bob Jones and the late Drs. Roy Tsuda and Lu Eldredge, with the strong support of late President Tony Yamashita. The physical structure was still under construction on the shore of Pago Bay, funded in part by a federal grant and partly by the Govt of Guam. A newly paved road led down the hill and through the “boonies” to the facility, the only structure on lower campus, and it was not unusual to spot Guam rails on the way to and from work. I even encountered a deer frozen in my headlights late one night.

A memorable grand opening was held in December 1970, with various federal, local, and military dignitaries in attendance and lots of speeches, as well as many laboratory displays to show off the new facility.

One of the most gratifying aspects of those early days was the strong sense of teamwork among the original five faculty members, all young and with the energy to work long hours writing grant and contract proposals, conducting and writing up research projects, teaching undergraduate and graduate courses (the latter primarily night courses, since most of the students were teachers or other full-time GovGuam and military personnel), and occasionally conducting “happy labor” days on the weekends to improve and maintain the building and grounds. Various faculty members taught classes four nights per week, as well as morning and afternoon labs on Saturdays. We were fortunate in having the able support of several dedicated office personnel and marine technicians.

We were starting from scratch, and an early goal was to establish credibility for the program on campus, locally, nationally, and internationally. Not all faculty on campus were enthusiastic about having a research operation in what they saw as a teaching institution. Not all legislators were enthusiastic about some projects being conducted in Micronesia. We were virtually unknown nationally and internationally. Professional publications and meeting presentations gradually helped bring scientific recognition, and it was pleasing indeed when we started attracting established researchers as visiting investigators. Technical reports on applied regional research, widely distributed, gradually solidified our local credibility. It was especially gratifying when the chairman of the Board of Regents returned from international travel to report that on one flight he had sat next an unidentified individual who sang the praises of our Marine Lab; this encouraged much stronger support of our operation by the BOR.

Throughout the decade of the 1970's there seemed to be almost constant budget crises for the Government of Guam and UOG, with only a few brief periods of relative stability. During mid-decade

there was one budget cycle when the legislature (perhaps inadvertently) eliminated funding for two occupied faculty positions. President Yamashita managed to come up with funding to cover those positions (which were partly used as matching funds on grants). When I later started my 3-year tenure as ML director shortly after Typhoon Pamela in 1976 there had been significant damage to the physical structure. Pieces of our destroyed seawater system were scattered about the Pago Bay reef flat, and the shoreline had been eroded approximately a third of the way up the hill to the lab building. President Yamashita again somehow came up with emergency funds to augment federal assistance and allow building repair and rebuilding of the seawater system. Times were still challenging, however, and there was one fiscal year when all occupied positions were funded but with less than \$10,000 in locally allocated funds for all other budget categories such as supplies and equipment. A dead vehicle battery constituted a major crisis. Fortunately, when Dr. Rosa Carter became President during this period, she continued strong administrative support for the Martine Laboratory.

Although we had no deep sea (“blue water”) research ship, our faculty and students were able to join several research cruises on ships operated by larger institutions. In 1975 I was the assistant chief scientist on a Scripps Institution of Oceanography research ship investigating several aspects of the Marianas Trench. My class of graduate students performed admirably and drew praise from the chief scientist. The cruise succeeded in dredging up the deepest rocks ever raised from the ocean floor up to that time, small samples of which were presented to the governor, speaker of the legislature, and the UOG president. Thereafter, some of my students liked to say that I was an expert on the Marianas Trench, which was the name of a local bar at the time.

By the time of the Marine Lab's 10th anniversary celebration, we had managed not only survival but stability. There was a sense of pride in having published more than 140 papers in professional scientific journals, produced more than 60 regional technical reports, mentored more than 35 graduate students, delivered numerous faculty and graduate student presentations at national and international meetings, and taught a variety of graduate and undergraduate courses.

I personally taught ~10 different biology courses at the graduate and undergraduate level, some of these only once as we scrambled to ensure that undergraduate biology majors met course requirements for graduation in a timely fashion. My undergraduate and graduate teaching and student advisement and mentoring of graduate thesis students continues to be one of my fondest memories. I am pleased that a number of former students have maintained contact over the years.

In 1975 I was designated the acting and founding director of the Water Resources Research Center (now the Water and Environmental Research Institute). Through the efforts of the late Congressman Antonio Won Pat, Guam had been included in federal funding for what had been only state institutes up to that time, although UOG did not seem to be aware of the appropriations. A visit from federal representatives to local government officials informed them that two years' worth of federal funds had not been utilized and were subject to revocation if an institute were not established. Inquiries to the UOG president motivated him to designate the Marine Lab to set up a water institute. I found the finger pointed at me as acting director since I was the only one with a laboratory doing a few basic water chemistry analyses.

There was considerable scrambling to assemble a set of research proposals to take advantage of the federal funds and get a water institute in operation. Marine Lab director Roy Tsuda and I labored

late into the night to get the final proposals assembled by the deadline before I was scheduled to depart to Washington and the annual national meetings of institute directors. We had the welcome “voluntary” typing assistance of my partner and one of her friends who had been pressed into service; this came after I had called the airline and postponed my flight by 24 hours.

I served as the acting WRRC director for a busy year before becoming Marine Lab director. During this time, we had a visit from the (perhaps somewhat skeptical) director of the federal Office of Water Research and Technology, preceded by my foray into the Marine Lab stockroom to mark a number of supplies as “WRRC matching.” Space for the initial WRRC laboratory was made available at the Marine Lab, and one of my graduate students became the first full-time lab technician. There was serious concern about a lack of engineering expertise, but it was not easy to recruit engineering faculty members. Fortunately, Dr. Stephen Winter was on campus as a teaching faculty member in what was then a college of applied technology, and we were eventually able to bring him on board as the institute's first engineer and permanent director. It was gratifying to receive a letter of commendation from the federal director of water research programs after that first year when I stepped down as the acting director.

Dr. Winter proved to be an excellent choice for director and made great strides in stabilizing research and administrative programs. It continued to be difficult, however, to recruit and retain faculty members with the appropriate expertise; and a number of highly qualified professionals came and went. By the time Steve Winter retired, I had become Dean of the Office of Graduate School and Research and again found myself acting director of a water institute with no permanent faculty but by then with an excellent laboratory and its own space in two houses on Dean Circle. With a lot of scrambling, Dr. Leroy Heitz was recruited as director and Dr. Shahram Khosrowpanah as a faculty member. Leroy eventually retired (after my time), but Shahram continued as a long-time professor until 2021. I find it personally gratifying that WERI has long since achieved stability and has grown significantly, among other things forming the core of the recently established College of Engineering.

My last four and a half years at UOG, 1984-88, were spent as Acting Dean and then Dean of the Office of Graduate School and Research. When I first occupied that position the university was on “show cause” status with our national accreditation agency and in danger of losing accreditation. It was again a stressful time, but the UOG faculty as a whole worked hard and mostly collaboratively to restore full accreditation status. For graduate programs and research units, this meant extensive debate, review, report writing, and elimination of some programs, not always without friction. A later period of financial exigency also marked my time in that position, but we persevered as always. Despite the constraints, we were able to prepare requests and receive several federal grants that supported new initiatives across UOG colleges and departments as a whole. Perhaps the most gratifying aspect of this job was my contact with and advisement of a number of graduate students in various programs. I like to think that I steered some in the right direction and perhaps helped others avoid significant missteps.

Despite challenges along the way, the 1970's especially were an exciting time at UOG. How great to be part of a growing university, to be working to build one of the first reef research institutes in the world, to have a physical facility in a prime location virtually on the edge of a thriving coral reef, to

be part of a team of active researchers working collaboratively, to have the opportunity to work on the spectacular reefs of Guam and Micronesia, to have the satisfaction of helping found a water research institute, and above all to experience the amazing friendliness of the people of Guam and Micronesia and have many of them as students. Guam political leaders and the UOG administration were generally strong supporters despite severe budget constraints and competing demands on resources, and there was the satisfaction of interacting with many faculty members in various disciplines on campus. What a great time to be alive!

Upon retirement in 1988 I was proud to be designated Professor Emeritus of Marine Biology. I value the opportunities that I had for studying reefs in Guam and Micronesia. More importantly, I continue to value my association with UOG as Professor Emeritus of Marine Biology and especially the people I worked with; and I continue to enjoy contact with some of my former students. I am also especially gratified to see how the university as a whole has grown and improved over the years, as well as appreciating the significant impact that the Marine Laboratory and Water and Environmental Research Institute are having locally, regionally, nationally, and internationally.

I am pleased to have established the James A. Marsh, Jr. Scholarship in Marine Biology and Water Resources to help support graduate thesis students in those disciplines. I see this as a way of giving back to Guam and its people and to the University of Guam, which have been so good to me. I especially want to encourage and help support graduate students in pursuing thesis research that will serve not only as a learning experience but will also contribute to an appreciation and understanding of the environment and resources which are so vital to the people of Guam and Micronesia. I hope that this scholarship will encourage the pursuit of excellence by the institution and on the part of individual students.