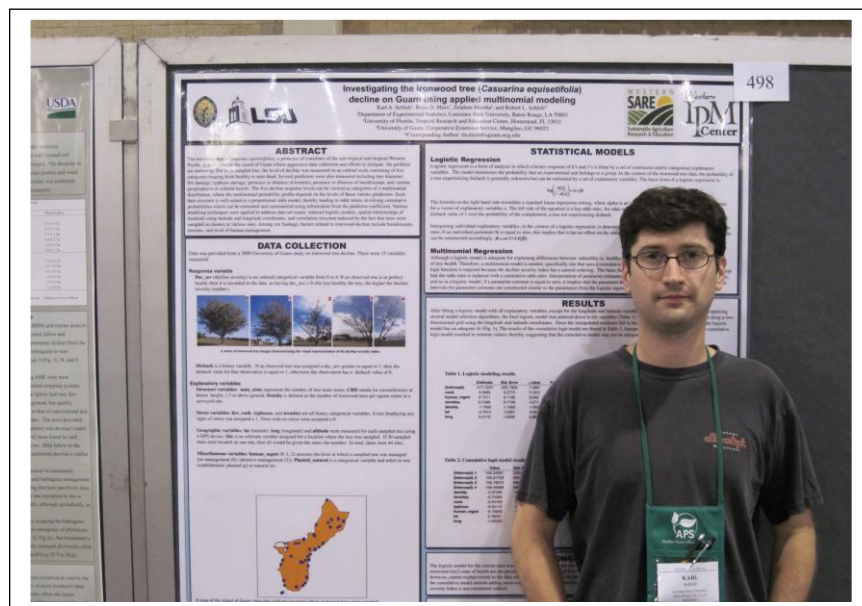


A Legacy Report
Robert L. Schlub, Ph.D.,
Emeritus Professor of Plant Pathology (1995-2022)

Brief Personal Background:

I was born during a snowstorm in Springfield, Ohio January 22, 1951, to Carl Frederick and Arvella May Schlub. Siblings at the time included an older brother and a sister, Richard and Carolyn. I can't remember a time when I wasn't interested the natural world. Much of my childhood was spent exploring the woods near my home or roaming the hills that shared part of my mother's childhood farm in Marietta, Ohio. I became fascinated with the microscopic world when I received a microscope for Christmas while in elementary school. The idea of becoming a scientist took root after I entered my first science fair in middle school. By my senior year of high school, I had narrowed my academic career choices to music and playing the French horn or plant science. After nearly losing my front tooth during an intermural basketball game, I settled on plant science. It was during my senior year at Ohio State University while working as a summer research assistant at the Wooster Experiment Station that I met Joanne DiLucca while playing in the summer community band. After earning my Master's in 1975, we married and moved to East Lansing Michigan. Choosing not to incur additional student debt, Joanne put her academic career on hold while I earned my Doctorate at Michigan State University. It was not until after the birth of our three children, Hala, Karl, and Susanna and my acceptance as an extension plant pathologist at the UOG in 1995 that Joanne would once again pursue a college degree. In 2010, Joanne and daughter Susanna graduated together from UOG. Joanne taught science and math courses at Father Duenas before retiring in 2018. Karl completed three years at UOG before graduating from the University of Utah in mathematics. It is particularly interesting to note that Karl chose to analyze ironwood tree data from one of my projects as his M.S. thesis project at Louisiana State University.



Karl A. Schlub presents poster at the American Phytophological Society 2010 Annual Meeting, Charlotte, North Carolina: Investigating the ironwood tree (*Casuarina equisetifolia*) decline on Guam using applied multinomial modeling. Not present are co-authors: Dr. Brian D. Marx, Dr. Zelalem Mersha, and Dr. Robert L. Schlub

Brief Academic and career synopsis:

- 1973 B.S. in Plant Pathology, Ohio State.
- 1975 M.S. in Plant Pathology, Ohio State University, Thesis: Effect of soybean seed coat cracks on seed exudation and seedling vigor in *Pythium ultimum* infested soil.
- 1979 Ph.D. in Plant Pathology, Michigan State University, Dissertation: Etiology and epidemiology of *Pythium ultimum* preemergence damping-off of soybean and of *Fusarium* species as secondary pathogens
- 1979-1980 post-doctoral research pathologist, US Department of Agriculture, Soilborne Diseases Laboratory, Beltsville, Maryland
- 1980-1984 Extension plant pathologist, Louisiana State University
- 1984-1995 Assistant director, co-owner, Our Children's House-Montessori School, Baton Rouge
- 1995 Began my career at University of Guam, Extension Plant Pathologist III
- 2000 Promoted to Extension Plant Pathologist IV
- 2005 Promoted to Extension Specialist V
- 2020 Promoted to Extension Specialist V, step 21
- 2022 Retired from UOG after 27 years
- 2022 Joined SEPRS

Years at UOG

For me, my career at UOG has been one surprise after another. I was surprised when I was informed that I would be interviewing for the UOG position over the phone and not in person. Even though the position was advertised in the Chronicle of Higher Education as a Horticulture position, the job description was that of an Extension Plant Pathologist. When asked, why the discrepancy, I was told the administration would only approve a search for a Horticulturalist, but in fact the College of Agricultural and Life Sciences wanted to hire an extension plant pathologist and thus the job description.

On that first day, after Extension agent Vince Santos finished a quick drive-around campus, he stopped in front of what appeared to be a campus dorm. Upon entering a retro-fitted dorm room, I was given the keys to the office that he and I would be sharing. He showed me how to use the controller for the air conditioner and pointed out the hook on the wall where our truck keys hung. Sensing the campus tour was over, I asked Vince, if he had time to show me the extension plant pathology lab. He seemed generally perplexed by my question and after a moment of awkward silence, he pointed out the table in the back of the room. There sat a large dusty antiquated dissection microscope and a set of well-worn plant compendia from the American Phytopathological Society. It was at this time I learned that I was the first Extension Plant Pathologist hired at UOG and that if I needed lab space, I should talk to Dr. Lee Yudin as he was on the building committee for the soon to be completed Agriculture and Life Sciences building.

After inquiring with Dr. Yudin, I found out that all laboratory and field research facilities were privy to Agriculture Experiment Station faculty and not to the extension faculty. After, telling him that I couldn't adequately do my job without access to a lab with some basic equipment such as a couple of good microscopes, glassware, and reagents, he told me there was no way the Dean was going to give me an equipped lab. He then told me about an unclaimed lab in the newly constructed Agriculture building and that he would be willing to pitch to the building committee that the lab be given to ANR. Lo and behold, Dr. Yudin was able to get the spare lab for ANR; unfortunately, it was completely empty. During the first year, the college provided lab chairs and

Dr. Yudin provided glassware. Using IPM extension funds and working with Dave Crisostomo, I obtained dissecting and compound microscopes. From that humble start, the ANR lab grew into a diagnostic plant disease laboratory. Funding for lab equipment, supplies, and personnel these past 27 years has in large part been due to my efforts and those of Extension Associate Roger Brown. After Roger's untimely death in June of 2021, Julia Delorm (formerly Hudson) stepped in and helped me close out my various grants and projects. Surprisingly, much of what I have accomplished over the years is directly due to the ANR lab and administration allowing extension personal such as myself access to funding and experimentation station resources once reserved only for research faculty.



Masked due to University COVID restrictions, Dr. Robert L. Schlub (center) is presented Emeritus certificate by UOG President Dr. Thomas W. Krise (right) and Dr. Lee S. Yudin Dean/Director UOG, CNAS (left).

Notable accomplishments:

As a 100% extension faculty appointee, at least 60% of my CFES has been dedicated to extension activities. Over the years I have been directly involved with the diagnoses of hundreds of plant samples and the writing of over 30 fact sheets and 14 newspaper articles. I have been Guam's IPM coordinator at the local and regional level for the past 20 years.

My participation in university and extension instruction began in my first year at UOG and continued into 2021. Though university instruction was considered a secondary role for me, I taught roughly 250 students over the course of 135 credit hours. Lecture and laboratory sections

were taught for AL 101 Introduction to Agriculture, AL 340 Pest Management, and AG 425 Plant Diagnostics. Extension instruction consisted mainly of one-on-one consultations with clients, with occasional guest speaker appearances at high school or university classes, field days and workshops. Major workshops which were funded by extramural sources and which involved participants and instructors from off island included: 2009, Ironwood Decline Conference; 2011, Soil Fertility and Nutrient Management workshop; 2016, Plant Disease Diagnostics Training for Agricultural Professionals; 2021, Training for Agricultural Professionals on the Identification of Prevalent Fungal Leaf Pathogens and their Diseases.

I held my last two major workshops in January of 2022. A full-day workshop was held for 19 agricultural professionals on January 3, 2022. The focus of the workshop was to update the citizens of Guam and the Northern Mariana Islands on the health of its ironwood tree, and to provide them with tree care practices that can be used to reduce the impact of pests and diseases in ironwood as well as other trees of the region. A day later began a 3.5 day in-person and virtual ironwood tree decline (IWTD) conference at the University of Guam Agriculture and Life Sciences building. Known ironwood tree researchers from across the globe were invited to attend in-person or virtually via zoom. The International Union of Forest Research Organizations (IUFRO) also posted an advertisement for the University of Guam IWTD conference on their twitter and Facebook pages, where an additional 300-350 people were notified of the conference and how to contact UOG if they were interested in attending virtually. Four researchers were able to attend the conference in-person: Dr. Anand Persad of ACRT Services, Sujana Paudel of the University of Hawaii, Dr. Claudia Husseneder of Louisiana State University, and graduate student Garima Setia of Louisiana State University. Many of the invited international researchers were unable to travel due to COVID restrictions. Virtual participants included researchers from the University of Hawaii, University of Florida, Louisiana State University, University of Pretoria (South Africa), the Indian Council of Forestry, the Chinese Academy of Forestry, the Commonwealth Scientific and Industrial Research Organization (Australia), and the U.S. Forest Service. During the two days of lectures, 31 people participated virtually via zoom and 4 people participated in-person, for a total of 35 participants. 17 formal presentations were given over the 3.5-day conference, including presentations by in-person and virtual attendees, and national and international researchers. The conference focused on exchange of knowledge and research discovery to ameliorate the impact of bacterial wilt in *Casuarina equisetifolia*, and unraveling the roles of *Ralstonia solanacearum* species complex, *Ganoderma australe*, wetwood bacteria, and termites in the decline of Guam's ironwood.

The process of creative/scholarly inquiry has been the cornerstone to activities that led to the writing of extensive production guides and reference manuals: 1998, Guam Cucurbit Guide; 2013, Gago, Guam ironwood tree, *Casuarina equisetifolia*: past, present, future; 2011, Soil Fertility and Nutrient Management for Guam and the Northern Mariana Islands; 2016, Eggplant, Pepper, and Tomato Production Guide for Guam; and 2018, Index of Plant Diseases in Guam.

My contributions to the service of UOG and the community included chairing and membership on various university and college committees. Highlights of my university service include: 1997, Chair, College of Agriculture Academic Master Plan Committee; 2001, Chair of the Agriculture and Natural Resources Unit; 2001 Secretary of the University Faculty Senate; 2004 Chair of the Agriculture Degree Program; 2004 Member of the University Promotion and Tenure Committee; and 2020 Graduate faculty of the Sustainable Agriculture, Food, and Natural Resources program. My contribution to the community of Guam is centered around being an

active member of the Guam Territorial Band for the past 23 years. In addition to supporting the band, I have played in numerous musicals and Guam Symphony concerts.

Of all my accomplishments, perhaps the most distinguishing are my successes of securing extramural funding and co-authoring numerous publications with off-island researchers. I estimate that I have been awarded Principal Investigator on over 30 projects totaling over 2 million dollars. Grants of exceptional merit include: 2001-2003 grant for \$159,450 on management practices for watermelon in tropics; 2003-2005 grant for \$163,150 on the impact of invasive weeds on the occurrence of the target spot leaf pathogen; 2004-2007 grant for \$241,815 on the characterization of the species *Corynespora cassiicola* and its impact on quarantine regulations; 2019-2022 grant for \$304,263 on restoring *Casuarina equisetifolia* as an agroforestry species in Guam through replacement of bacterial wilt infected trees and research into bacterial microbiomes and associated termites. During my tenure at UOG and during my first year as an emeritus professor, I have authored or co-authored over 48 abstracts, proceedings, and refereed journal articles. Journal articles of note include: 2009, Host Specialization and Phylogenetic Diversity of *Corynespora cassiicola*. *Phytophology* 99:1015-1027; 2015, Identification and Characterization of Bacteria Associated with Decline of Ironwood (*Casuarina equisetifolia*) in Guam. *Australasian Plant Pathol.* 44:225-234; 2015, Specific Detection of *Klebsiella variicola* and *Klebsiella oxytoca* by Loop-mediated Isothermal Amplification. *Plant Pathol Microbiol* 6:271; 2019, *Ralstonia solanacearum*, *Ganoderma australe*, and Bacterial Wetwood as Predictors of Ironwood Tree (*Casuarina equisetifolia*) Decline in Guam. *Australasian Plant Pathol.* 48, 625–636; 2019, Morphological and Molecular Species Identification of Termites Attacking Ironwood Trees, *Casuarina equisetifolia* in Guam. *J. Econ Entomol.* Aug 3:112(4):1902-1911 and 2021, Complete Genome Sequence of Tomato Leaf Curl Guam Virus, a Novel Tomato-infecting Begomovirus from Guam, USA. *Microbiology Resource Announcements.* 10(49):e00954-24.

Great disappointments:

- Being rejected by the then Promotion and Tenure committee for advancement to Full Professor
- The intervention of the President in preventing my daughter Susanna to participate in the UOG graduation ceremony with her friends and mother
- Needing to get the Faculty Union involved in the rewarding of an earned increment
- The University not offering resources for spouses, partners, and family members of UOG faculty and visiting scholars.

Great fulfillments:

- The Vice President recommending me for Full Professor to the President and Board of Regents
- My daughter Susanna and wife Joanne graduating from UOG
- Participating with my son in his pursuit of a Master's degree at Louisiana State University

Words of wisdom:

- Faculty, there are enormous opportunities at UOG that lie hidden below the surface.
- Administration, do not begrudge faculty support, advancement, and salary entitlements, for it is these that shape their UOG experience and ultimately their Guam experience.