

2020 Distinguished Career Award: Response

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To begin with, I congratulate my fellow awardees Vera, Estella, Julie, Valerie, Rocio, Scott, Nick, and Cameron, who are also being honored at AMQUA's 27th Biennial Meeting here in Madison. I want to thank Camille Holmgren, my former student and long-time collaborator, for nominating me for the Distinguished Career Award (DCA) and the distinguished AMQUA selection committee for choosing me.

I have always judged professional honors by the list of previous honorees. The roster for the AMQUA Distinguished Career Award includes many of the pioneers in Quaternary science. I have known most of them personally, hold them in the highest regard as role models and mentors, and frequently revisit their seminal works and discoveries. To be listed among these pioneers is truly an honor that I surely don't deserve. To quote John Steinbeck in clear reference to impostorism, "I am not a writer [scientist]. I've been fooling myself and other people."

While Quaternary science was established in the early 20th Century (Eurasian countries organized the first INQUA Congress in 1928), it progressed rapidly after WWII with Willard F. Libby's discovery of radiocarbon dating and the first application of stable isotope ratios to reconstruct paleoclimate from ice and ocean cores by Willi Dansgaard and Harold Urey and his protégé, Cesare Emiliani, respectively. In the U.S., interest in global change and the accelerated pace of Quaternary science justified, among other things, establishment of AMQUA in 1970, with the 1st Biennial Meeting held in Bozeman, Montana and Yellowstone and Herb Wright, Jr. as its first President. From the beginning, AMQUA embraced the premise that Quaternary studies are, by definition, interdisciplinary and offer unlimited opportunities for interactions between the physical, biological, and social sciences. As Herb pointed out in the 1970 AMQUA newsletter ([Vol. 1, No. 2](#)) with a suite of basic and applied questions, Quaternary science is societally relevant. When I served as the Technical Program Chair for the 24th Biennial Meeting held in Santa Fe in 2016, Felisa Smith and I set the theme at "Retooling the Quaternary to Manage the Anthropocene," a battle cry we must sustain to promote our science and its societal value.

I first joined AMQUA in 1982, when as a graduate student I attended the 7th Biennial Meeting in Seattle with a focus on "Character and Timing of Rapid Environmental and Climatic Changes. Two years later, I attended the 8th Biennial Meeting in Boulder with the theme, "Seasonal Climatic Responses in the Quaternary." Both the 1982 and 1984 meetings had a profound influence on my way of thinking and introduced me to many of the past Distinguished Career Awardees spanning two generations. At the 27th Biennial Meeting in Madison, I'm proudly celebrating my 40th year as a member and AMQUA conferee.

I was first exposed to 'science without boundaries' as an undergraduate student in anthropology at UT-Austin in the early 1970s, and I was totally immersed in it as graduate student, majoring in geosciences and minoring in ecology and evolutionary biology, at the University of Arizona in the 1980s. When I was doing Southwestern archeology in the late 1970s, I became fascinated with packrat middens and came to Tucson specifically to learn from Tom Van Devender. Tom was then at the Desert Laboratory, an intellectual watering hole and 860-acre long-term ecological research site, co-managed by the University and USGS. To make ends meet as a graduate student, I initially worked for Jeff Dean at the Laboratory of Tree-Ring Research and then for Ray Turner with the USGS Water Resources Division's National

Research Program, a juggernaut of integrated hydrological science first established by Luna Leopold in the early 1960s.

My early career was defined by multidisciplinary. My Ph.D advisors included Paul Martin (a paleoecologist and former DCA), Vic Baker (a geomorphologist), Vance Haynes (a geoarcheologist/alluvial stratigrapher and former DCA), Ray Turner (an ecohydrologist), and Jim Brown (a macroecologist). When I was hired permanently by the USGS National Research Program, I was guided by an ecotoxicologist, a phytoplankton ecologist, a microbiologist, a ground-water hydrologist/geochemist, and a stochastic hydrologist. I had license to see the world through their multiple lenses. These formative years at the University of Arizona and USGS, two institutions with intentional cultures of interdisciplinary, truly dictated many of my later research interests, including hydroclimate variability, climatic teleconnections, arid lands geomorphology, land use impacts, fire/flood frequency, ecohydrology, plant biogeography, vegetation dynamics, drivers and consequences of ecological disturbance, plant migration/invasion, ecological synchrony, and large-scale phenological monitoring.

Perusing my bibliography, a friend of mine once remarked that, in choosing collaborators, I was either incredibly lucky or very strategic. Because some of them chose me, and serendipity almost certainly played a role, I would say that I was both. I've been fortunate that many of my close colleagues and former students have stuck with me for decades. They are truly too numerous to list here, but they know who they are.

Both life and career paths are seldom linear. Our individual stratigraphies are full of uncomformities, and these discontinuities are often serendipitous and usually formative. When I was 9 years old, my family and I left Havana at the beginning of Castro's revolution and moved to Dallas, Texas, where I learned to speak English without an accent in a matter of months. Clearly, diaspora changed the course of my personal and professional life. I think it's important for each of us to acknowledge and embrace these uncomformities, especially their serendipity and how discontinuities impact our lives and careers. Finally, I want to thank my wife Teresa, my son Mark, and my daughters Acacia and Francesca. They have supported my professional life for the past four decades, while serving as a constant reminder that work-life balance means you can't hug your reprints.