

2010 MEDALS & AWARDS

STRUCTURAL GEOLOGY & TECTONICS DIVISION CAREER CONTRIBUTION AWARD

Presented to
George H. Davis



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University of Arizona

Citation by Robert W. Krantz

Many structural geologists complete significant research on select tectonic problems; George Davis played a fundamental role in the discovery of a completely new continental scale orogeny. Many earth scientists publish text books; Structural Geology of Rocks and Regions, by Davis and Reynolds, has become a standard for undergrad classes with thousands of inspired students. And almost all academic staff provide departmental and university service; George Davis supported the University of Arizona at the highest level, ultimately serving as Provost and Executive Vice President.

Shortly after arriving in Tucson as a young professor, George focused his research on what we now take for granted as metamorphic core complexes. George's investigations were among the first to document extensional kinematics, and he went on to work with other colleagues to define an orogeny that affected the North American Cordillera in middle Tertiary time, adding a new chapter to our tectonic story. These investigations culminated in the 1977

Penrose Conference on Metamorphic Core Complexes convened by Max Crittenden, Peter Coney and George in 1977. Subsequent applications of these concepts to other regions contributed to global understanding of similar orogenic systems, leading to a second Penrose Conference on Metamorphic Core Complexes in 1987.

Among his most enduring achievements, and demonstrating his passion for sharing structural geology, is George's text book, Structural Geology of Rocks and Regions. With the third edition now in preparation, including coauthors Steve Reynolds and Chuck Kluth, George's text went where no structural reference went before: it made it fun. Countless reviews have noted the accessible, entertaining style that draws students in, and the combination of geologic and non-geologic examples (pepperoni pizza?) that demonstrate and reinforce critical concepts. Finding a text that effectively covers the material is fortunate; having a text that inspires and connects with students is priceless.

Beyond geology, George has always had passion for larger academic issues and service. From department chair to University of Arizona Vice Provost and Vice President, and then ultimately as Provost and Executive Vice President, George brought a grounded science background to a university facing dramatic challenges, and he helped administer strategic solutions that focused on excellence and achievement. While appreciating his support of earth science from these lofty posts, colleagues and students found it easy to re-ignite George's passion for structural topics and distract him from administrative issues.

During his "working" years, George supervised more than 40 grad students and served on committees of many more. Being a Davis student meant working as a peer, from project planning and logistics to analysis and reporting. George consistently promoted self-reliance and leadership, which beyond scientific success led so many of us to rewarding academic and industry careers. Of course, along the way there was plenty of time for fun, or "sick fun" as George might categorize collecting thousands of lineation data or making plane table maps of vertical cliffs.

Yet, in spite of all the self-reliance that George has taught, and all that his students have achieved on their own, there is no question that they also enjoy his reflected glow. His technical insight, careful science and great personal warmth are such that even today, many years after graduation, we take

great pride in the phrase, "I was a George Davis student."

Response by George H. Davis

My passion for structural geology has burned brightly ever since Dr. Charles Moke introduced me to "structures" at The College of Wooster. Nothing has dimmed this fire. Even while holding university leadership positions I had to do geology. Most administrators move on. UA President, Peter Likins, would say of me that every graph I made looked like a mountain, and every analogy was tectonic.

Most of you suffer the same disorder. Psychologist Roger Shepard believes that preoccupation with kinematics of "reversible transformations" are rooted deeply psychologically in our evolved visual systems as human beings, giving rise to our abilities to appreciate symmetrical patterns. What Shepard regards as an appreciation we regard as a profession. We address transformational puzzles in glorious field settings, and relate solutions to forces, stresses, time, and history. This combination is what makes our disorder totally incurable.

We share common paths, attending GSA as undergraduates and seeing the big names from a distance; give our first talk; move into the rhythm of national meetings; experience Penrose Conferences. We learn we are part of a community of scientific discovery, and grow to learn that knowing, trusting, respecting, and enjoying one another are as important as doing the mapping. In our early professional careers we experience unplanned moments of impact that give us a sense we might amount to something. In 1973 at GSA, Greg Davis and Clark Burchfiel waved me over to their table for a beer, and told me they liked my talk about the Rincons. We connect with towering influences. Mine was Peter Coney. Our ventures together in core complex discovery gave me a rare taste of cutting-edge science.

We make personal decisions regarding what is important. Our strategies have decadal influence on how we individually operate. My directions emerged at the confluence of two well-springs: *Structural Analysis of Metamorphic Tectonites* (Turner and Weiss) and *Folding and Fracturing of Rocks* (John Ramsay). "*Structural Geology of Rocks and Regions*" intends to reveal how we in fact think about the earth, and our passion for what we do.

Besides my parents, my wife Merrily, and our family, there are two special

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communities whose meaning in my personal and professional life I must underscore. One is all of you. We come together as structure-tectonics people in ways minimally intersected by university, corporate, or agency politics. I believe we age well together, like a good wine. At meetings and on field trips we delight in picking up where we left off.

Then there is the special community of my very own students. It pleases me, Bob, that you connect me with promoting self-reliance and leadership. First-hand field experience was the "*bread-and-butter*" of my teaching, followed by the most precious gift I could give: freedom and responsibility in choosing a project and a pathway. This is precisely the

same gift that my Ph.D. advisor at Michigan, Bill Kelly, gave me.

Bob, as I look at you this very minute, you represent *all* of my students, graduate and undergraduate, and I thank you for what you have done for me, not just today, but over the many years.