



RESOLUTIONS OF RESPECT

Resolution of Respect

for Eric Rodger Pianka: 1939–2022

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In his memoir of time spent studying lizards in the Australian outback, Eric Pianka imagines facing trial for excessive, wanton, and merciless killing of the reptiles. His defense, that collecting tens of thousands of lizards underpinned a formidable lifetime contribution to herpetology and community ecology, fails to convince a lizard jury, which finds him guilty. He is subsequently eaten alive by a gigantic varanid, *Megalania prisca*. Eric never suffered this saurian retribution, but he came close to dying in other ways on several occasions, most recently after being gored by one of his bison. Eric always made it through these near misses, and even “survived” a hoax in which a colleague falsely announced his death. But to the dismay of his friends, colleagues, and family, Eric finally and definitely died, quietly, on September 12, 2022, at his home in the Texas Hill Country, with his daughter, Gretchen, at his side.

Photo credit Gisela Kaufmann

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There is a lot that Eric would have wanted to say about his life, and to get a jump on posterity, he made sure he said it first himself, in a well-known obituary he wrote many years ago. He was born on January 23rd 1939 to Gini and Walt Pianka and grew up in Yreka, California, in the shadow of Mount Shasta, with his three siblings, Michael, Nick, and Jeannine. Eric became fascinated with lizards and snakes from the age of six, after encountering what he later deduced was *Anolis carolinensis* at a roadside pullover on a trip to see relatives (on this occasion Eric captured only its tail). As a teenager, he was seriously injured when a bazooka shell he had gleefully recovered from a local firing range exploded unexpectedly in his front yard. Although he spent nearly a year in a body cast and walked with a limp for the rest of his life, Eric shrugged off the effects of his injuries, which only began to hold him back later in life.

The injuries certainly did not derail his education and pursuit of a scientific career. Eric finished a B.A. at Carleton College in Minnesota, graduating in 1960, and earned his Ph.D. in 1965 from the University of Washington in Seattle, where he worked under functional anatomist Richard Snyder. His doctoral research focused on the ecology and diversity of North American desert lizards along a latitudinal gradient from Idaho to Arizona, a transect he plied for three field seasons, living out of a blue Volkswagen he called Betsy. At Washington, he worked with and alongside future colleagues, including Gordon Orians, Mary Willson, John Emlen, and Henry Horn.

In 1962, Eric began a long correspondence with Robert MacArthur that shaped the course of his career. Eric's letters are audacious yet brimming with respect and interjected with frequent apologies for his poor typing. MacArthur's detailed handwritten replies, always prompt and incisive, make clear the early and profound influence his work on competition and community structure had on Eric's thinking. In his initial correspondence, Eric lays out his interest in understanding gradients in the diversity of lizard communities. But he noted that "very little seems to be known about their general ecology, and I can use this as an 'excuse' for the work in case I get no startling results on the species diversity problem." For Eric, the "diversity problem" was the perfect confluence of theory and empirical opportunity. He went on to work closely with MacArthur, receiving a National Institutes of Health fellowship that allowed him to undertake an 18-month expedition to Australia.

It is hard to overestimate the profound and enduring influence that MacArthur had on Eric, personally and scientifically. The term "role model" would not have meant much to Eric. However, Eric would talk with unusual warmth and affection about MacArthur, remembering his kindness and the great sense of loss caused by his early death in 1972. MacArthur's clear theoretical paradigms, fused with Eric's single-minded determination, energy, and physical toughness, resulted in empirical studies that were mind-boggling in their ambition and improbability. The sense of legacy that MacArthur left the scientists who worked closely with him likely spurred Eric on.

The late 1960s and early 1970s was a golden time for Eric, when he published much of his best-known work. Google Scholar notes that several of these works have been cited more than 1000 times, including classics like "On Optimal Use of a Patchy Environment," "On r and K Selection," "The Structure of Lizard Communities," and "Latitudinal Gradients in Species Diversity: A Review of Concepts." Another citation classic is his textbook, *Evolutionary Ecology*, which remains one of the most persuasive accounts of why neither ecology nor evolution can be studied without the other. First published in 1974, it went through six editions and is still an international standard. For decades, Eric

taught his senior undergraduate class from this text, with an intensity, vibrancy, and personal force that few who attended ever forgot.

This period was also a time of domestic happiness. Eric met and married Helen Dunlap (Fig. 1), and they had two daughters, Karen and Gretchen. He accepted an assistant professorship at the University of Texas at Austin in 1968, where he would work for more than 50 years (Figs. 2–4). Building on his initial research, he conducted several long expeditions to desert ecosystems, especially Australia’s Great Victoria Desert, often accompanied by Helen, who provided skillful field support, and their young family.

Eric spent nearly 10 years of his life at desert field sites, and he continued to return to them for as long as he was physically able. His empirical studies of lizard communities on three continents were unprecedented in addressing ecological questions at broad temporal, spatial, and taxonomic scales. For Eric, the thought of studying a “community” of two or three species was unimaginable. He amassed vast troves of study material and data, filling the shelves of natural history collections with specimens and undertaking big data analysis before the advent of personal computers. (Until the end of his life, boxes of computer punch cards cluttered the recesses of his office). Undaunted by the increasingly technical approaches developing for the integration of ecological data and models, Eric remained eternally optimistic that fundamental insights would emerge from analysis of extensive databases forged from carefully recorded observations. With exuberance undiminished by the challenge of applying new technologies, he embraced innovations such as molecular methods for phylogenetic systematics and spatial analysis for landscape ecology.

Eric was not just a superb ecologist; he was also a passionate herpetologist (he received the Distinguished Herpetologist Award from the Herpetologists’ League in 2004). He was captivated by the beauty of reptiles’ morphological and behavioral adaptations, and this fascination enabled him to bring his knowledge of ecology into clear focus. Herpetology provided him with a perspective from which to study a wide range of ecological topics, such as competition and niche differentiation, life-history evolution, and the influence of disturbance and spatial heterogeneity on community structure. Eric worked closely with herpetologist Laurie Vitt, editing *Lizard Ecology: Historical and Experimental Perspectives* and writing the visually stunning *Lizards: Windows to the Evolution of Diversity*. With Ray Huey and Thomas Schoener, he also edited *On Lizard Ecology: Studies of a Model Organism*. Over many years, he collaborated with one of us, Kirk Winemiller, and others on global studies of lizard niche diversification and convergence. His contributions to herpetology are immortalized taxonomically in the *Ctenotus* lizard genus of Australia, with two species named after him and Helen; *Ctenotus piankai* and *C. helenae*. Two lizard parasites, the tapeworm *Oochoristica piankai* and the nematode *Skrjabinodon piankai*, also carry his name.

Eric’s lifetime contributions earned him numerous professional honors, including a Guggenheim Fellowship; an American Association for the Advancement of Science Fellowship; the Denton A. Cooley Centennial Professor of Zoology Chair; a Fulbright Senior Research Fellowship; a Doctor of Science degree from the University of Western Australia; and the Distinguished Scientist Award from the Texas Academy of Science. In 2014, he was elected to the American Academy of Arts and Sciences, and in 2015, he received the Ecological Society of America’s Eminent Ecologist Award.



Fig. 1. Newlyweds Eric and Helen, Yreka, California Christmas 1965. Photo courtesy of Gretchen Pianka.



Fig. 2. Eric and Bob May in Austin, Texas 1974. Photo courtesy of Larry Gilbert.

As for the person, perhaps only a few of us really knew small pieces, gleaned through transient windows of access. Eric had a complex personality; he was passionate and reflective, opinionated and polemic, brusque and sometimes belligerent. He experienced many losses and knew tragedy. He was close to his siblings, especially his brother Michael, but all of them died before him, as did his eldest daughter, Karen. Gretchen, his youngest daughter, and her three children, Margaret, Isabella, and Maxwell, were sources of great pride and pleasure, and he and Helen remained lifelong friends after they separated in the mid-1980s. Apart from his family, he appeared to depend on no one. Eric was extraordinarily self-sufficient, and during the second half of his life, he remained determinedly alone. For most of the last 40 years, Eric lived in a simple stone house on a bluff overlooking Flat Creek in the Texas Hill Country. He built the house himself and made it a peaceful, if spartan, sanctuary. Motivated by the property tax benefits of raising livestock, he chose bison rather than “slow elk” (his disdainful term for cattle) a rare indulgence requiring colossal investments in fencing, feed, and water infrastructure, but he enjoyed the company of his tatonka immensely.

For most of his life, Eric was physically almost indestructible (as U.S. ordnance manufacturers could attest), with a prodigious work ethic. Infrequent guests to Flat Creek were rapidly exhausted, finding themselves pounding fence posts into bedrock before the sun rose high and then clearing juniper



Fig. 3. Eric in Big Bend, Texas 1987. Photo courtesy of Larry Gilbert.



Fig. 4. Eric in his UT office in Patterson Laboratories, 2018. Photo courtesy of Larry Gilbert.

throughout the heat of the day. To him, modern amenities such as electricity, plumbing, and Internet access were extravagances rather than necessities. He prized solitude, the natural soundscape, and the darkness of the night sky, and he witnessed with increasing frustration the creeping urbanization that violated his refuge. Eric loved the natural world, and he mourned its demise with rare intensity and outrage, emotions that were sometimes mistaken for extremism.

In argument, he could be unyielding, blunt, and unapologetic. Eric did not always accept criticism and could be slow to forgive those who crossed him. But when collaborating with trusted colleagues, he was usually quick to accept advice and to compromise. Those who knew him well perceived surprising degrees of insecurity and tenderness. There was a poetic side to Eric's nature, perhaps never fully expressed. Aldo Leopold was a major influence, but despite frequent encouragement, he never did write the *Flat Creek Almanac*, his version of Leopold's classic *A Sand County Almanac*. However, he was fond of poetry and sometimes gave moving recitations of his favorites during lectures.

Eric was frequently perceived to be an intimidating and sometimes brooding presence. But his friends often saw him unrestrained and playful. In the late 1980s, undergraduate students at the University of

Texas were startled to encounter their imposing professor walking a large monitor lizard on a leash around campus. When he could be talked out of his responsibilities as a rancher, he would occasionally meet with colleagues and graduate students at a local pub. The conversations usually veered far from science and conservation biology, and Eric was the stimulus for wild ideas and laughter. Everyone who knew that side of Eric treasures the memories of those good times.

Eric dedicated his life to a MacArthurian quest to establish the principles of evolutionary ecology. Evolution and ecology were his only creeds, providing the lens through which he perceived his world. To his friends, that world often looked to be a lonely place, particularly in his later years, but the rare opportunities to share it with him were formative and unforgettable. Once you earned his friendship, it was an abiding allegiance, and he was fiercely protective of and loyal to the people he trusted. Eric was an ecological purist, he thought like a mountain, and he was as implacable as a mountain. And like a mountain, his positions, often viscerally and irascibly expressed, were immovable reference points countering the generational drift that we use to excuse and accept the ways we are destroying our planet. These points, relentlessly and compellingly conveyed through his science and the way he lived, were his lasting gifts to us.

Acknowledgments

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Selected Publications

- Huey, R. B., and E. R. Pianka. 1974. Ecological character displacement in a lizard. *American Zoologist* 14:1127–1136.
- Huey, R. B., and E. R. Pianka. 1981. Ecological consequences of foraging mode. *Ecology* 62:991–999.
- Huey, R. B., E. R. Pianka, and L. J. Vitt. 2001. How often do lizards “run on empty?”. *Ecology* 82:1–7.
- MacArthur, R. H., and E. R. Pianka. 1966. On optimal use of a patchy environment. *American Naturalist* 100:603–609.
- Mesquita, D. O., G. C. Costa, R. Colli, T. B. Costa, D. B. Shepard, L. J. Vitt, and E. R. Pianka. 2016. Life history patterns of lizards of the world. *American Naturalist* 187:689–705.
- Pianka, E. R. 1966a. Convexity, desert lizards, and spatial heterogeneity. *Ecology* 47:1055–1059.
- Pianka, E. R. 1966b. Latitudinal gradients in species diversity: a review of concepts. *American Naturalist* 100:33–46.
- Pianka, E. R. 1970. On r and K selection. *American Naturalist* 104:592–597.
- Pianka, E. R. 1973. The structure of lizard communities. *Annual Review of Ecology and Systematics* 4:53–74.
- Pianka, E. R. 1974. Niche overlap and diffuse competition. *Proceedings of the National Academy of Sciences of the United States of America* 71:2141–2145.
- Pianka, E. R. 1976a. Natural selection of optimal reproductive tactics. *American Zoologist* 16:775–784.

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- Pianka, E. R. 1976b. Competition and niche theory. Pages 114–141 in R. M. May, editor. *Theoretical ecology: principles and applications*. First edition. Blackwell Science Ltd, Oxford.
- Pianka, E. R. 1995. Evolution of body size: varanid lizards as a model system. *American Naturalist* 146:398–414.
- Pianka, E. R., L. J. Vitt, N. Pelegrin, D. B. Fitzgerald, and K. O. Winemiller. 2017. Towards a periodic table of niches or exploring the lizard niche hypervolume. *American Naturalist* 190:601–616.
- Schall, J. J., and E. R. Pianka. 1978. Geographical trends in numbers of species. *Science* 201:679–686.
- Schall, J. J., and E. R. Pianka. 1980. Evolution of escape behavior diversity. *American Naturalist* 115:551–566.
- Vitt, L. J., and E. R. Pianka. 2005. Deep history impacts present day ecology and biodiversity. *Proceedings of the National Academy of Sciences of the United States of America* 102:7877–7881.
- Vitt, L. J., E. R. Pianka, W. E. Cooper, and K. Schwenk. 2003. History and the global ecology of squamate reptiles. *American Naturalist* 162:44–60.
- Winemiller, K. O., D. Fitzgerald, L. Bower, and E. R. Pianka. 2015. Functional traits, convergent evolution, and periodic tables of niches. *Ecology Letters* 18:737–751.
- Winemiller, K. O., and E. R. Pianka. 1990. Organization in natural assemblages of desert lizards and tropical fishes. *Ecological Monographs* 60:27–55.
- Winemiller, K. O., E. R. Pianka, L. J. Vitt, and A. Joern. 2001. Food web laws or niche theory? Six independent empirical tests. *American Naturalist* 158:193–199.

Books

- Pianka, E. R. 1986. *Ecology and natural history of desert lizards. Analyses of the ecological niche and community structure*. Princeton University Press, Princeton, New Jersey, USA.
- Pianka, E. R. 2000. *Evolutionary ecology*. Sixth edition. Benjamin-Cummings, Addison-Wesley-Longman, San Francisco, California, USA. Pages 528.
- Pianka, E. R., and L. J. Vitt. 2003. *Lizards: windows to the evolution of diversity*. University of California Press, Berkeley, California, USA. Pages 348.