

OBITUARIES

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Findlay Ewing Russell: 1919–2011

“Do you want some water for your dog?” I stopped as I heard the voice call down from the road. It was a hot August afternoon in southeastern Arizona, and we were walking up the South Fork Cave Creek Canyon Road from Portal toward the Forest Service building. Looking up, I saw Dr. Findlay Russell standing at the driveway of his home, the Bar-M Ranch. As my black Labrador downed several gallons of water, Russell invited us back to join him that evening for “drinks on the veranda.” Over daiquiris, with the spectacular Chiricahua Mountains as the backdrop for an impressive sunset, Russell talked of snakes, venoms, academia, and the desert. For this budding toxinologist, it was a rare opportunity to discuss science and life away from the hustle and constant interruptions that have characterized much of life since, and I have never forgotten Russell’s mentoring and friendship at such a critical point in my early graduate career nearly three decades ago.

Findlay Ewing Russell was born in San Francisco on 1 September 1919, to William and Mary Jane Russell, but he spent most of his early years growing up in Los Angeles. As detailed in the Oral History Project at California Institute of Technology (Caltech) Archives (Cohen 1994), he attended grammar school at Santa Barbara Avenue Grammar School and then completed his public education at Poshay Junior High School and Manual Arts High School. Like many of us “herper types,” he had an interest in venomous and poisonous animals in high school, an interest that would lie dormant but not dissipate. Awarded a scholarship after graduating, he initially attended the University of Southern California (USC) but finished his bachelor’s degree at Walla Walla College in Walla Walla, Washington. He worked for a short time as a chemical engineer in Ohio and then joined the Army during the Second World War, serving as an army medic in the Okinawa Campaign. He received a Purple Heart and two Bronze Stars during his time in the military and left in 1946 after an injury. At this time, he decided to enter medical school where he completed his initial medical training at USC before transferring to Loma Linda University to finish his MD in 1952.

Russell was a Caltech research fellow from 1951–1953, during which time he initiated research on stingray venom, work that was later supported by the Office of Naval Research. This early work marked the beginning of his professional research with venoms and venomous animals, research which would take him around the world and involve him in refining treatment of one of the most enigmatic and difficult to manage medical

emergencies: snakebite. In addition to his research duties (and numerous practical jokes on fellow students and faculty), he sought to improve the social life of students and peers by teaching ballroom dancing; Russell and Dr. Albert Tyler also organized dances and invited female students from nearby Pasadena City College to join them. In 1951, Russell worked as an intern at the Los Angeles County General Hospital, and in 1953 he accepted a position at the Huntington Institute of Medical Research at the Henry Huntington Hospital in Pasadena. He remained at Huntington until 1955, when he received a professorship at USC. He was at USC for over thirty years, serving as professor of neurology, biology and physiology and as director of the Laboratory of Neurological Research and Venom Poisoning Center at Los Angeles County-USC Medical Center.

At the Center, he was intimately involved in the treatment of venomous bites. The tremendous population growth in southern California at that time meant that encounters with biting and stinging creatures were inevitable and increasing. A relatively common problem, particularly in the nearby southern Mojave Desert communities, was the treatment of black widow spider (*Latrodectus hesperus*) bites on rather delicate parts of the male anatomy, received while using outdoor toilet facilities.

In those days before well-established regional Poison Centers, Dr. Russell served as an important consultant and source of information on emergency treatment for envenomations, and he became a leading world authority on the treatment of snakebite. Fortunately for me, and my bewildered attending physician, Russell was only 45 minutes away from the hospital where I received treatment for an all-too-close encounter with a neonate Southern Pacific Rattlesnake (*Crotalus oreganus helleri*) when I was a teenager. Although I did not know him personally then, I benefited from his near proximity and the treatments developed to aid my recovery.

While at USC, in spite of his considerable workload and in addition to his medical degree, Russell somehow found the time to earn a PhD in English. He also began work on his house in Portal, Arizona, spending as much free time as possible at his ranch there, away from the demands of emergency medicine, research, teaching, and other duties which occupied his life in Los Angeles. By the early 1980s, in fact, the call of the desert proved to be too much to resist. Russell joined the faculty of the University of Arizona College of Pharmacy in Tucson in 1981, where he remained until his retirement in 2006.

Russell was the first president and a founding member of the International Society of Toxinology (IST) in 1962. He and colleagues coined the term toxinology to distinguish this branch of study from the broader field of toxicology, and the society they established is dedicated to the study of venomous animals and their venoms, as well as toxic and poisonous plants, microbes, and fungi. Russell helped establish the Society’s journal *Toxicon*,



Findlay Ewing Russell, 2001.

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PHOTO BY KENT BEAMAN



Panel discussion at the Biology of Rattlesnakes Symposium, Loma Linda University, 2005. From left to right: Henry S. Fitch, Findlay E. Russell, and Robert C. Stebbins.

PHOTO BY S. P. MACKESSY



View from the porch of Bar-M Ranch, looking up the South Fork of Cave Creek Canyon, Chiricahua Mountains, Arizona, 2011.

which published its first issue in October 1962. He was editor of *Toxicon* from its inception through 1969, when Dr. Philip Rosenberg assumed that role. He was a frequent contributor to the new journal, with more than 80 publications over a 35-year span; his first paper in *Toxicon* was published in the inaugural issue in 1962 (Russell et al. 1962), and his last was published in 1997 (Russell 1997). His many contributions to the Society were commemorated at the 17th meeting of the European Section of the IST held in September 2011 in Valencia, Spain. When the IST hosts its 17th World Congress on Animal, Plant and Microbial Toxins in Honolulu, Hawaii in 2012, Russell would undoubtedly be pleased with the venue and to see how the Society has grown and matured over its 50-year history.

From his first publication listed in PubMed in 1953 to his last in 2006, he published over 160 papers on a variety of topics concerning venomous animals and their venoms, and envenomations. He also contributed many chapters on venoms and treatment of envenomation in medical, pharmacological, and toxicological textbooks. Russell published numerous books, and edited many more, but the book most familiar to herpetologists, physicians, and toxinologists is *Snake Venom Poisoning*, published in 1980 (and reprinted in 1983 with corrections). Though nearly 30 years old, this classic text still contains much useful information on the basic biochemistry of venoms, sequelae of envenomation, and treatment of snakebite (if one overlooks the rather bizarre treatment of “Hobbies” at the end of the book). In

this landmark publication, he made a strong case for avoiding fasciotomy as a routine treatment for severe edema/swelling of ten accompanying rattlesnake and other viper bites, and he was a tireless champion for the use of massive quantities of antivenom to counter the necrotizing and potentially fatal outcome of snakebite and other envenomations. Though there have been many changes to emergency health care and tremendous improvements in supportive treatment, the basic approach advocated by Russell remains the standard for treatment of snakebite.

Over the course of his life, Russell was the recipient of numerous awards and recognition, including the receipt in 1974 of the Skylab Achievement award for his work with NASA. He received an Honorary Doctor of Laws degree from the University of California, Santa Barbara, in 1989. In 1992, the University of Arizona College of Pharmacy established the Findlay E. Russell Distinguished Citizen Award in his honor and named him as the first recipient. He was made an Honorary Member of the Society of Toxicology in 2000 and was awarded the Loma Linda University Alumnus of the Year in 2011. He was a Fulbright Scholar, a visiting professor at many universities throughout the world, and a consultant for the World Health Organization, Doctors Without Borders, and the National Science Foundation.

Russell passed away in Phoenix, Arizona, on 21 August 2011, just shy of his 92nd birthday. Less than a month before, I had again stood on the porch of his ranch in Portal, this time to pick up reprints and photographs from Dr. Russell’s work given to me by his son, Mark Russell. Standing there that late summer afternoon, I had the opportunity to reflect once more on the career of a man who was a tremendous influence in his field of medical toxinology. Like many, Findlay was a complex person, at times brilliant beyond imagination, at other times arrogant beyond belief. He could rapidly alternate between astonishing and vexing to his colleagues. However, his contributions to the field of toxinology were beyond question. I found him to be a considerate and intellectually stimulating individual, and I am grateful to have had the opportunity to know him. He is survived by his children—Christa Russell Cessaro, Sharon Russell Boyle, Robin Russell, Connie Russell Lane, and Mark Russell—as well as ten grandchildren, and one great-grandson.

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LITERATURE CITED

- COHEN, S. K. 1994. Interview with Findlay E. Russell, January 18, 1994. Oral History Project, California Institute of Technology Archives, Pasadena, California. Accessed 15 January 2012 (http://resolver.caltech.edu/CaltechOH:OH_Russell_F).
- RUSSELL, F. E. 1983. *Snake Venom Poisoning*. Scholium International, Great Neck, New York. 562 pp.
- . 1997. Contributions to the History of Herpetology: Adler, K. (ed.), Ithaca, NY: Cornell University Press (1989). *Toxicon* 35:617–618.
- , F. W. BUSS, AND J. STRASSBERG. 1962. Cardiovascular response to *Crotalus* venom. *Toxicon* 1:5–18.