

OBITUARY: WILLIAM F CAIN, SJ (1937–2017)



Bill Cain with colleagues Sheila Griffin (left) and Ellen Druffel (top) at the 16th International Radiocarbon Conference (Groningen, Netherlands) in June 1997. Photo courtesy Kimberley Elliott.

Bill Cain was born in Orange, California, and studied chemistry at Loyola University in Los Angeles. He worked for the Lockheed Missiles and Space Company as a junior research chemist from 1958–1959 before entering the Jesuit novitiate at Los Gatos, California. Bill studied at St. Louis University (BA, PhLic, 1964), University of Detroit (MS, chemistry, 1965), and Santa Clara University (STM, theology, 1969). He pursued doctoral work in chemistry under the supervision of Hans E. Suess (1908–1993) at the University of California San Diego, and received his PhD in 1975.

Bill was a well-loved professor at Loyola Marymount University (LMU), where he served as department chair, chair of the faculty senate, and a valuable mentor to many undergraduate students. Bill was six feet, eight inches tall (just over 2 meters), with a deep voice and a quick wit.

In his research, Bill studied radiocarbon in tree rings that grew in urban and rural areas during the past century. Earlier, he studied the kinetics of hydration of a cobalt cation while working with John A. McLean, Jr. at the University of Detroit. Bill discovered that heartwood contains up to 15% additional later carbon that is deposited in the ring during the transition from sapwood to heartwood, which became known as the “Cain effect.” This effect is corrected if cellulose, instead of whole wood, is ^{14}C dated. Most recently, Bill studied near monthly tree rings from western Oregon and found an offset between the $\Delta^{14}\text{C}$ values in the tree ring and those in atmospheric CO_2 at the time of formation. The pattern led him to believe that atmospheric circulation, specifically shifts of the polar jet stream, led to unusually low ^{14}C in tree rings that grew from 1962 to 1964. Results of this work are published in this volume.

Bill was a dear friend to us. Sheila and Bill worked together at the Mt. Soledad Lab in La Jolla. They shared a love of fine food, and had many discussions about politics and religion. Bill spent

lots of time at Griffin family parties. Ellen did her undergraduate research under his guidance, and he helped guide her toward graduate school. Bill mentored Kevin at LMU where he majored in chemistry. Bill had a wonderful sense of humor. He put up with many pranks by chemistry majors and took them in good stride. We worked together with Bill at UCI during his sabbatical of 2003–2004 on the tree ring research reported in this issue of *Radiocarbon*. Our work with Bill was both enjoyable and a treasured gift.

Bill passed away on January 14, 2017, at the Sacred Heart Jesuit Center, Los Gatos, California. He is survived by his siblings Jim Cain, Margaret Dunkle and Mary Collier, and their families. Bill's humor, wisdom and high standards were among his many hallmarks. We miss him dearly.

Ellen R M Druffel, Sheila Griffin,
and Kevin C Druffel-Rodriguez

SELECTED REFERENCES

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