

FREDERICK C. LEONARD: BEFORE HE KNEW METEORITES. R. S. Clarke, Jr.¹, ¹Department of Mineral Sciences, National Museum of Natural History, Washington, DC 20560-0119, USA (rclarke@volcano.si.edu).

Frederick Charles Leonard (1896–1960) dominated the early Meteoritical Society (MetSoc) as its founding President and Past President (1933–1941), Editor (1933–1956), author of its Constitution, and behind-the-scenes manager. This was not an original pattern. The teenage Leonard founded the amateur Society for Practical Astronomy (SPA) and performed these same roles during its lifetime (1911–1917). The SPA served as dress rehearsal for the MetSoc.

Leonard burst on the scene in 1909, a precocious 13 year old, self-appointed Director of the Leonard Observatory (3" refractor), and Editor of its *Monthly Notices* (original typescript +3 carbons, none of which survive). Leonard lived close to the University of Chicago where astronomer Forrest Ray Moulton was an early sponsor. At the 10th Anniversary Meeting of the American Astronomical Society, Yerkes Observatory, Williams Bay, WI, in August 1909, Leonard audaciously infiltrated the Society's group photograph. This image of a teenage boy peering from among the leaders of American astronomy presages Leonard's later occasionally awkward relationship with astronomical officialdom.

Leonard entered high school in 1910 and began an onslaught of published reports: 7 in *Popular Astronomy* (PA) and 3 in the *English Mechanic and the World of Science* (EMWS), including several on Halley's Comet. Leonard formed the SPA in early 1911 when he was 15 and immediately began editing a professionally printed *Monthly Register of the SPA* (MRSPA), largely financed by the father of his co-editor. Early issues were circulated to attract membership, and the Society grew from a handful to 80–100 members. The MRSPA provided Leonard an additional outlet for his frequent reports, but primarily served as a platform for lengthy discourses on SPA affairs and the organization of amateur astronomy. Leonard's unrelenting stream of observations and preachy commentary aroused existing tensions within professional astronomy. Should amateur astronomy be organized to benefit science, and who should organize it? Between 1911 and 1918, Leonard graduated from high school, obtained degrees in astronomy from the University of

Chicago; observed at Yerkes, the University of Virginia; and at Denver with the Yerkes 1918 eclipse expedition. Leonard's correspondence with E.C. Pickering, Director, Harvard College Observatory, and E.B. Frost, Director, Yerkes Observatory, document these activities extensively.

The SPA did not survive WWI, and Leonard began graduate work at the University of California (UC), Berkeley, with A. Leuschner in 1919. His observational work was at the Lick Observatory, Mt. Hamilton, where he completed a well-received Ph.D. on the spectra of visual double stars in 1921 under W.W. Campbell, who soon became UC's President. In early 1922, Leonard began teaching mathematics and astronomy at the newly designated UC, Southern Branch in Los Angeles. Despite a lack of instruments, he soon had a vigorous introductory program going and was teaching only astronomy. An early success was the graduation of Fred L. Whipple in 1927, just as UCLA was created. Leonard talked Whipple into going into astronomy and Berkeley into accepting him. Leonard liked teaching but chafed at a lack of research opportunity, even though he had some access to Mt. Wilson. It was in 1930 that Leonard first revealed an interest in meteorites: he asked H.H. Nininger to help him with his small collection. Nininger did help, and Leonard's career path then veered away from astronomy to a strong focus on meteoritics. In 1933 he organized the Meteoritical Society and dominated it for a number of years as he had the SPA.

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References: [1] Rothenberg M. (1981) *Social Studies of Science*, 11, 305–325. [2] Rothenberg M. and Williams T. (1999) *The American Astronomical Society's First Century*, 40–52, American Astronomical Society, Washington, DC.