

David Levy and his Observing Logs

By Roy Bishop

David Levy is the most remarkable amateur astronomer of the modern era, ever since it became possible to categorize astronomers as either amateurs or professionals in the mid-19th century. As the discoverer or co-discoverer of 23 comets, Levy's name is firmly embedded in the history of astronomy. As an author and as a public speaker, Levy is outstanding. Also, Levy is the first person to be involved in the discovery of comets by three techniques: visually (9), photographically (13), and electronically (1).

David Levy is an amateur in the best sense of that word — he pursues astronomy for the sheer love of it, and shares his passion for the stars with all those he encounters. There are many others who do the same. What sets Levy apart is his dedication and talent for both astronomical discovery and communication. As the discoverer of a multitude of comets, as the author of many books, and as the spellbinding speaker at hundreds of public presentations involving audiences ranging from children to professional astronomers, Levy is unique. Moreover, it was his enthusiasm for observing, together with his participation in the research program of Eugene and Carolyn Shoemaker that resulted in the discovery at Palomar of Comet Shoemaker-Levy 9 in 1993 which, a year later, impacted Jupiter, the most dramatic and widely-observed astronomical event in the history of astronomy. That comet, usually referred to as SL-9, also impacted David Levy. His adept handling of the resulting avalanche of publicity made him the most widely known amateur astronomer on our planet. Levy's participation in the Shoemakers' *Palomar Asteroid and Comet Survey* had begun four years earlier, in 1989, and lasted until that program ended in 1996.

I first met David Levy in the autumn of 1969 when he was an undergraduate student at Acadia University in Nova Scotia, and I was on the faculty. Even then we shared time with telescopes under the stars. Our paths have crossed many times since. A quarter of a century later, in the spring of 1995, I had the privilege of presenting him for an honorary degree at his alma mater. Two years later I introduced David and the Shoemakers when, at Acadia, they gave their last joint public presentation. My feelings about David Levy perhaps have been best summarized by the writer Timothy Ferris in the citation he prepared when Levy was awarded the 1993 Amateur Achievement Award of The Astronomical Society of the Pacific (one of many awards for which Levy was chosen *before* the discovery of SL-9). Ferris wrote: "Those who have had the pleasure of hearing Levy speak come away impressed not only by his command of astronomy but by his human qualities: warm-hearted, eloquent, generous, and fundamentally decent, he is one of the nicest guys you could hope to meet."

David and his wife, Wendee, live in Vail, Arizona. Nevertheless, The Royal Astronomical Society of Canada is honoured to call David Levy one of its own. Levy was born in Montreal in 1948, has been a member of the RASC Montreal Centre for nearly half a century, and currently is the Honorary President of both the Montreal and Kingston Centres of the Society. In 1980 at its annual meeting in Halifax, the RASC awarded him the Society's Chant Medal for his work on variable stars and for promoting astronomy for children, in particular. In 2002 in Montreal he received the Society's Simon Newcomb Award for his literary talent. In 1988 the International Astronomical Union named asteroid 3673 "Levy" in his honour. Levy's invitations have ranged from elementary school classes to the White House. He holds degrees from Acadia University in Nova Scotia (B.A.), Queen's University in Ontario (M.A.), and the Hebrew University of Jerusalem in Israel (Ph.D.), plus honorary degrees from five universities. Among his current commitments, Dr. Levy contributes the article *Observing Comets* and his list *Deep-Sky Gems* for the annual *Observer's Handbook* of the RASC, and the columns *Nightfall* for the popular Canadian astronomy magazine *SkyNews*, and *Evening Stars* for *Astronomy* magazine.

Levy's deep love for the night sky, and boundless enthusiasm for experiencing it pervade his life. In 2010, he gave a copy of his observing logs to the RASC. Thanks to Walter MacDonald, those files are now accessible on the RASC website. The logs cover over half a century, beginning with memories of sky events from his childhood. Levy's main focus has been a search for comets which began on 1965 December 17, although his records cover everything in the sky — Moon, planets, eclipses, variable stars, meteors, sun pillars, occultations, constellations, sunspots, lightning, zodiacal light, green flash, rainbows, clouds, *etc.*!

Over the years Levy organized his observing sessions by numbering them in sequence, beginning with the solar eclipse of 1959 October 2. However, those numbered sessions were preceded by three earlier childhood memories of an observation of the Big Dipper, a meteor, and of inventing his own constellations composed "of stars resembling friendly beacons in a lonely night."

Each page of his observing logs, in Levy's distinctive handwriting, typically contains records of half a dozen sessions. The record for each session begins with the session number, an indication of whether the session took place in daylight or dark (and if in dark, the portion of the night), the date (occasionally the month is indicated, but seldom the year), the clock times when the session began and ended, an indication of sky conditions, the location, telescope(s) used, other people present, and observations. Levy developed a concise code for the basic information such that many of the session reports occupy no more than two or three lines. Asterisks precede observing sessions of particular

significance, with up to three asterisks for those that were extraordinary. Among the latter is observing session #6684, involving the discovery of his first comet on 1984 November 13, after 19 years of searching! Over eight years later, session #8949 records the night that the discovery films of SL-9 were taken. As of 2011 August 15 he was at observing session #16,328 for an average of more than 300 sessions per year for over half a century. Aside from Levy's remarkable dedication, those figures were made possible by his decision to live in Arizona, both for the clear skies and for his health.

Several of the session records are sprinkled with personal comments by Levy, and "guest book" comments by numerous friends and acquaintances who shared evenings under the stars with him. Other names occur from time to time, including *Lima Bean* and *Bounder*, Levy's cats, and *The Beagle*, the dog that Levy shares with Wendee. More frequent are *Miranda*, *Minerva*, *Echo*, *Pegasus*, and others; Levy's names for his various telescopes. *Miranda* is a 41 cm Newtonian with which he made the majority of his visual comet discoveries. *Minerva* is his cherished, 44-year-old, portable, 15 cm Newtonian. *Echo* is a 9 cm Newtonian that Levy has had since his childhood. *Jarnac*, the name of his observatory, is the name of his paternal grandfather's cottage in the Laurentian mountains of Quebec where Levy made some of his earliest observations of the night sky.

In his notes for session #12,572 late in 2001, thirty-six years after the start of his program of searching for comets, Levy wrote: "The primary goal [has been] not the discovery of comets but the *search* for comets. The primary aim was and is: To become *very* familiar with the sky through searching for comets and/or novae." Few people know the night sky as well as David Levy, and *very* few can match his talent both for discovery and for inspiring others about the wonders of astronomy.

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