

## Award

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### 2011 Service Award for Richard Norman Pugh

It is my pleasure to present Richard (Dick) Pugh as the recipient of the Meteoritical Society's Service Award for 2011. In the Pacific Northwest of the USA, it is no exaggeration to say that no one has done more than Dick to increase education and public awareness of meteorites and the fireballs that produce them. Dick has inspired people of all ages, from first graders to retirees, to look for and identify meteorites. He also helped uncover the story of how the 1981 Salem meteorite was found by an off-duty policeman, and he is the main reason why the number of Oregon's known meteorites recently jumped by 50%, from 4 to 6.

Although Dick's passion for the last forty years has been meteorites, his bread-and-butter day job for 31 years before retiring in 1999 was being a science teacher at Cleveland High School in Portland. There he taught physical science and introduced courses in astronomy, geology, and meteorology. Beyond the curriculum, he helped excite (some might say indoctrinate!) students about meteorites, using in the classroom meteorites that he obtained from Glenn Huss and others. As a result of this training, one of his charges later found a new meteorite—the Study Butte, Texas chondrite.

After retirement Dick was free to become even more active in public outreach and education, and in 2003 he joined Melinda Hutson and myself to establish the Cascadia Meteorite Laboratory (CML) at Portland State University. Ever since, Dick has been the CML's main outreach person, traveling to schools, libraries, grange halls, science fairs, and education workshops across the state, interacting with people on a one-on-one basis, helping them to identify their "strange rocks" that mostly weren't meteorites, letting them handle real ones, and teaching people how to find new meteorites (Fig. 2). Although retired, Dick thinks nothing of traveling to remote regions across Oregon, Washington and (lately) Idaho on multi-day road trips with his "teaching collection" of meteorites. No town is too small, but precisely because they are small, Dick's visits often generate local media attention. In each town, Dick typically lectures at schools during the day and at libraries or other

community centers in the evening. In this way he interacts both with school kids and adults. Thanks largely to Dick's hard work, this program reaches about 2000 people per year (for a partial list of venues, see <http://meteorites.pdx.edu/outreach.htm> ).



*Fig. 1. Dick Pugh at a presentation venue.*

Dick is much better at communicating with lay-people than I or most researchers are. Probably thanks to his years of experience as a high school teacher, he knows how to communicate with children. But more than that, he seems to identify with the adults in rural communities, and they with him. This is probably why his lectures are so popular.

Here is sampling of quotes from people who have attended his events: 1) "Dick Pugh's slide presentation was excellent & then complemented w/the hands on meteorites following the program"; 2) "The presentation had wow factors and was kid friendly"; 3) "The kids loved handling the meteorites and asking questions. The speaker related well to 9-11 yr olds"; 4) "Mr. Pugh presented to a wide range of students (1<sup>st</sup>

through 5<sup>th</sup> grade) and was able to keep all students engaged while addressing their varied questions and interests”; 5) “Great to see people from as far away as Walla Walla and LaGrande – audience was very enthused with the presentation, especially knowing that Summerville may be ‘ground zero’”; 6) “Dick Pugh has a life passion—my students still talk about him one year later”; 7) “Follow-up conversations from residents indicated that this is one of the best programs ever had at Fossil.”

I remember a few years back when Dick said that one of his lifelong goals was to help find just one more meteorite in Oregon. Well, he surpassed his wish all at once, flushing out two new meteorites for Oregon in 2010 thanks to the outreach program and the notoriety it has enjoyed. Both of the new meteorites, Morrow County and Fitzwater Pass, were picked up by their finders decades ago. Fitzwater Pass was stored in a coffee can before being brought to one of Dick’s public presentations; Morrow County was stored first in a flower bed and then under a barbeque grill before someone suggested to the finder that maybe Dick Pugh should take a look at it. No one is better at hand specimen identification of meteorites than Dick.

Dick is a familiar face in the Society. With rare exceptions he attends the annual MetSoc and LPSC meetings and keeps tabs on recent developments related to planetary science and meteorites. It was at these meetings that I first met him, before I moved to Oregon. Dick counts Carleton Moore, Roy Clarke, and Gene Shoemaker as mentors and Candace Kohl and Tim Jull as fellow globetrotters. The post-meeting trips taken by Dick, Candace and Tim are legendary. This includes a 2.5-week-long thirst-inducing trip to see impact craters in the Australian outback organized by Gene Shoemaker, with Roy Clarke as Dick’s tent mate on a trip attended also by Clark Chapman (Perth meeting, 1990), and an only slightly more informal 2.5-week-long cross-continental rail trip from Berlin to Beijing via the trans-Siberian and trans-Mongolian railroads cooked-up by Candace and Tim (Dublin meeting, 1998). Ask Dick about these and other trips and you’ll be rewarded with humorous accounts.

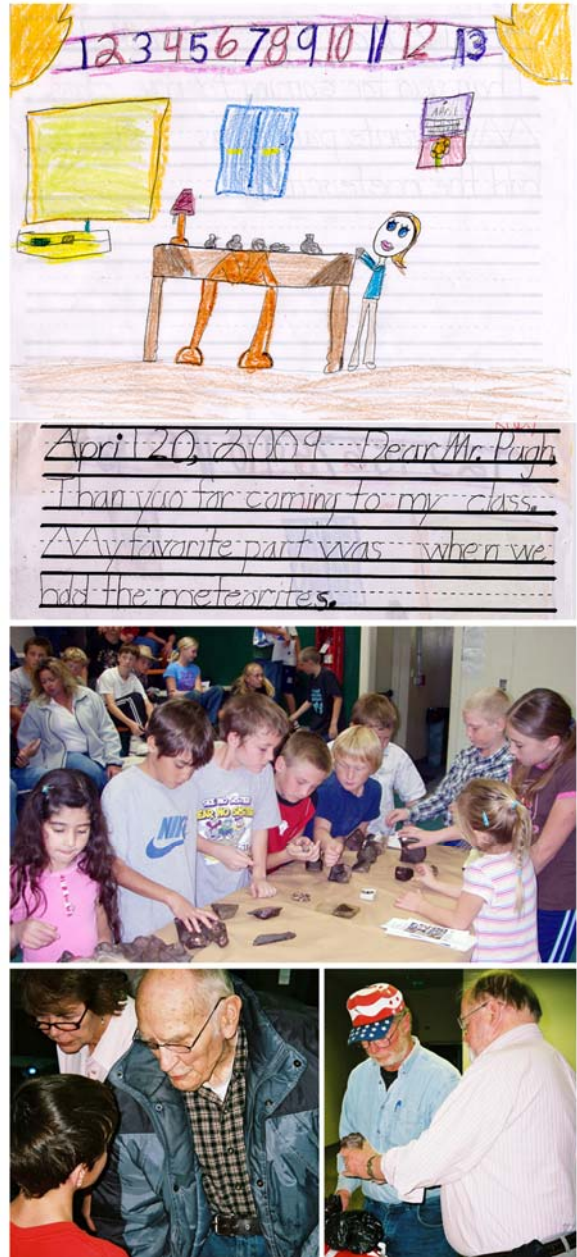


Fig. 2. Top: Drawing and handwritten letter from a first grade girl at parkrose-Shaver school, Oregon, after a visit by Dick. Middle: School kids in Mt. Vernon, Oregon, in 2007 examine some of the meteorites in Dick Pugh’s “teaching collection of” while others (background) await his presentation. Bottom left and right: Participants at a hands-on meteorite display in Kennewick, Washington in 2008; Dick Pugh is wearing the white shirt at lower right.

Dick also has made scientific contributions to meteoritics, including reports on fireballs and meteorites. One of these contributions includes the controversial-- but perhaps increasingly accepted-- idea first made by Dick and geologist John Allen in 1986 that the largest recovered meteorite in the U.S., the 14,107 kilogram Willamette iron found in Oregon, was transplanted from Canada on an ice raft during the Bretz floods that coursed through the Pacific Northwest at the end of the last ice age.

Finally, because Dick knows the educational and scientific value of meteorites, he understands the importance of maintaining and preserving meteorites for the future. In 2005, Dick started an endowment at Portland State University for the curation of meteorites in the CML collection. This

endowment helps to pay for lab supplies and for the purchase of meteorites that can be used for scientific study. He has contributed personal funds to this endowment, as well as helped solicit donations for it from others.

For all these reasons, Dick Pugh richly deserves the Service Award from the Meteoritical Society, and I am pleased that the Society has recognized his achievements.

Dr. President and fellow members of the Meteoritical Society, I present Richard Pugh.

**Alex Ruzicka**

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