Memorial to Thomas R. McGetchin 1936–1979

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Tom McGetchin was born in La Jolla, California, on July 31, 1936. His father was a surveyor; as a child, Tom used to help him in his work. Growing up in the outdoors on the beautiful California coast instilled in Tom a lifelong intense love of the sea and of sailing, and probably turned his interests toward geology. In high school he held several positions of leadership; unlike most of us, he kept in contact with his high school friends throughout his life. As a geology major at Occidental College, Tom wrote a senior term paper on Mars which excited him a great deal and clearly sparked his interest in planetology. It is rumored that while an undergraduate he had an offer to play professional baseball, which he turned down. He retained a lifetime interest in ballistics, however, through his interests in impacts and volcanic ejecta.

Tom then went on to a master's degree at Brown and a Ph.D. at Cal Tech (1968) where, working with Lee Silver and Gene Shoemaker, he did a fundamental study of the Moses Rock kimberlite dike in Utah. This dissertation, like much of his work, was a multidisciplinary study including petrogenesis, dynamics of intrusion and eruption, and implications to planetary structure and evolution. Tom never thought small, either scientifically or humanistically. His thesis work forged him into a volcanologist who was passionately interested in planetary geology. Silver said that during his years at Cal Tech he always thought of Tom as a colleague, never as a graduate student.

After Cal Tech, Tom served on active duty with the U.S. Air Force (1967–1969) as assistant professor of geophysics at the Air Force Institute of Technology. He managed to interest several Air Force officers in master's theses by encouraging them to apply their military interest in ballistics to the study of the ballistics of volcanic ejecta. This was very typical of Tom—he was always looking for ways to apply principles of physics and engineering to geologic problems.

From 1969 to 1974 McGetchin was an assistant professor at MIT, where he attracted enthusiastic students who, with his guidance, studied volcanoes in almost every possible way, including mapping, sampling, seismology, high-speed photography for ballistic studies, and infrared imaging. He even recorded the sound of an erupting volcano and worked with an acoustic engineer to interpret the data. Volcanoes in Italy, Iceland, Hawaii, and Central America all got the McGetchin treatment. During this time he was still thinking and publishing on the planets and asteroids and was a member of the Apollo Field Geology Team, working in astronaut training and mission planning. Toward the end of his time at MIT, Tom fought his first bout with cancer and after nearly a year, won. Recovering from the battle increased Tom's zest for life, his tolerance for and interest in other people, and his maturity. Having been close to death when he was in the process of establishing his career instilled in Tom a perspective that few of us ever fully feel, namely, that each day of being alive is a miracle in itself. He would grin

quietly as colleagues fretted under the stresses of scientific involvement that seemed to require 110% participation for survival. Tom recognized the illusion and the continued importance of quiet places in one's life.

He then went on to form the Geosciences Group at Los Alamos Scientific Laboratory in 1975. Los Alamos was interested in forming a rock mechanics group, but Tom convinced them that the group should be much broader. The prestigious group working at Los Alamos today is one of his many legacies. Tom whipped up the enthusiasm of the group and stimulted it to high productivity. One member of the group points out that Tom thought about and posed more problems in earth sciences in a single day than most of us consider in a lifetime. Although he had no time to follow all of his ideas through, some were completed through Tom's and his colleagues' efforts. His unbureaucratic attitudes bothered some small-minded people: whether or not there was money for a project was never a problem, and a few people thought Tom was trying to take over their projects, when he was merely trying to help by throwing ideas out to them. Empire-building never interested Tom—he was not at all egocentric and was just interested in getting things done. During the time at Los Alamos, he managed to publish more on volcanoes, xenoliths, thermal history of plutons, and his first love, Mars.

In 1977 McGetchin became director of the Lunar Science Institute whose name, because Tom always thought big, was changed to the Lunar and Planetary Institute. He managed to move the institute away from its predominantly lunar focus to enthusiastic consideration of volcanoes around the solar system, earth-based studies from a planetary perspective, and terrestrial remote sensing. He published two more papers on Mars and eagerly thought about, and promoted, a manned mission to Mars. One had the feeling that the institute was moving forward and was an exciting place. In 1979 cancer reappeared, and Tom was forced to resign his position. He moved to Hawaii, one of his favorite places, and stayed with a college friend, Tom McCord. He died on October 22, 1979.

In late September, Tim Mutch presented Tom with NASA's Public Service Award for "leadership in the NASA transition from lunar science towards a broadly based planetary science program. His achievements in developing new concepts to apply space technology in solving important planetary science problems contributed significantly to the creation of new science applications and educational prospects." Several of his friends came to Hawaii for the presentation.

While the above paragraphs describe, very briefly, Tom McGetchin's professional life, they do not tell much about what sort of person he was. To him, people were as important as science. Tom was married to Carlé Pieters; it was a very happy and love-filled marriage. He was a conscientious and devoted father to his two children from a previous marriage, Doug and Meg. He also left many friends who truly loved him. This is unusual to say about a man, but it is true of Tom. I have tried to analyze why this is so. I think it is because he was so enthusiastic about life in general and science in particular. He was never small-minded. He was free of the unpleasant trappings of ego. Most of all, he had an almost childlike simplicity—life is exciting, you do what excites you most, people are good, and that's about it. Tom's enthusiasm was passed on to others. I, and others who talked with him during his last weeks, have commented that a talk with Tom, even in that period, left us feeling that he was doing all the giving. We felt good after our conversations.

Tom loved the outdoors, especially sailing and the sea and wandering around in New Mexico in an old pickup, preferably with an enchilada and a beer. He and Carlé would take off for their Santa Fe house from Houston whenever they could.

Tom thought in matrices and graphs. Everything from complex science to household management found its way onto a matrix or graph; his blackboards cannot be described. He talked simply, with plenty of "y'knows"; complex ideas were described in incredibly simple language, because things were simple and very exciting to Tom. Tom had no hierarchy of people; students were as important to him as Nobel Laureates. He loved to beat ideas around, preferably over beer in the evening or at breakfast in Houston when neither he, Carlé, nor anyone else really knew how many people might turn up. People who came started their day with a bang, with the McGetchin grin lighting up the room. It is rare to see such enthusiasm coupled with such intelligence. He believed in scientific synergism, probably because he worked so easily with others. He loved to assemble people from different disciplines to tackle a problem; he used the consortium approach to great advantage at Los Alamos and in Houston. He never behaved as the stereotypical administrator but always as a friendly colleague.

He may have seemed naive to those who didn't know him. His use of simple language, his emotional enthusiasm about science, life, and the people he cared about, and his apparently simplistic view of life are not hallmarks of a sophisticate to most people. But he had thought through thoroughly what life was about and what was important. His first illness and other setbacks hastened this process, so that he was truly sophisticated in his wisdom of the world. He could be truly objective about his and other people's lives without ever losing his warmth.

Tom wrote down his ideas about life exactly three months before he died much better than I could ever do. He wrote:

> Shaping your stone means quietly doing your job as well as you can. Your identity will soon be lost to history but your stone, if well shaped and polished, will fit into the structure we call civilization and hold its weight as time sweeps past us and others build upon us. History is full of greed, horror, and the worst in mankind—*but* humanness is built of well-shaped loving lives. What we do matters and, if there is beauty in the world, it is because many quiet souls have shaped their stones well and the cathedral of life is beautiful, after all.
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> Loving matters most—friendships are what make living good and full or empty. Giving and being real, the good and bad, but sharing it all in loving acceptance and without judgement. We are so similar under the skin and we need each other.
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> Taking the next step is about the hard part of life. It's about courage and it does mean trying to do what's next, even though it's painful. It also means taking *the* next step, not the next 10 at once, but the important (essential) thing is to keep moving, even if however slowly it seems.
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> What death and life mean are beyond knowing for now. I don't believe we blink out like a light but that could be egotism or false hope. It doesn't matter for now; for now there is my stone to chip and polish, souls to love and be truly myself with and always the next awkward step to take.

We who knew him miss him a lot.

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