

Presentation of the Roebling Medal of the Mineralogical Society of America for 1987 to Gerald V. Gibbs

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Mr. President, Members, and Guests:

In Autumn 1955, Jerry Gibbs arrived at the University of Tennessee. He was freshly armed with a bachelor's degree in geology from the University of New Hampshire and with the desire to study geysers with me. My own interest in this fascinating subject had been kindled by Tom Barth, the 1961 Roebling Medalist. Naturally, I was assigned to be Jerry's advisor and naturally, I studied his transcript. Conspicuously absent were any courses in mathematics and physics. When I asked why, Jerry said he wasn't any good in math and had done poorly in it in high school. Well, I didn't want to accept this so I replied, "Maybe you had a poor teacher and, besides, if you want to get anywhere in geology, you'll have to shore up your background in mathematics!" So I assigned him courses in math and physics. Looking back at 37 years of advising graduate students, I think I hit my peak right then. At any rate, the teachers were good and, to put it mildly, he did well.

However, the study of geysers was not to be. Chiefly it was a matter of money. Neither Jerry nor I was being overwhelmed by it at the time. Moreover, the summer of 1956 was pre-empted for Jerry because he had to take our summer field course so ably taught by Harry Klepser. There he discovered the vegetable okra. For that story I refer you to either Jerry or Harry.

At any rate Jerry did extremely well during his first year at Tennessee, even in math and physics. By his second year I had received a Penrose Grant from the Geological Society of America to study cleavage in quartz. This funded a research assistantship, which I offered to Jerry and which he accepted. Expedience had dictated my choice of research topic. It could be carried out with a universal stage, polarizing microscope, and hammer, the only items of equipment at hand. In 1957, for Jerry's second summer in Tennessee, I had secured summertime positions for Jerry, and another student, Abe Shekarchi, as well as for myself. Early each morning we drove about 30 miles from Knoxville to the U.S. Bureau of Mines research lab at Norris, Tennessee. In those days, there were no freeways so we took intricate short cuts. We passed by some of Knoxville's lesser known social establishments, among them the Green Spider Pool Hall. But it was worth it. For the first time we had access to X-ray equipment, an electron microscope, hardness testers, a well-equipped lab for wet-chemical analyses of silicates,

and above all, a magnificent suite of synthetic fluorophlogopites and fluoramphiboles of various compositions. Accordingly, Jerry changed his master's topic to "The effects of Li and Ba substitution on the optics of synthetic fluorophlogopite." While at Norris, Jerry worked at many other projects beside his thesis research. Indeed he showed, what is so evident today, an amazing ability to react with co-workers on a variety of projects and to keep precisely in tune with each project. He can, so to speak, change his mental gears instantaneously without slowing down a bit.

After completing his master's with me, Jerry had the great good fortune to go to Penn State and work with Joe Smith. At this point Joe should really take over because he was the powerful second-stage booster that projected Jerry into orbit. No pun intended. It was Joe who brought Jerry to the forefronts of mineralogy. Jerry's dissertation was on protoamphibole, a compound synthesized at the Norris lab. Until Jerry discovered otherwise, we had thought it was fluoranthophyllite.

Charles M. Schwab once said, "When a man has put a limit on what he *will* do, he has put a limit on what he *can* do." And therein lies Jerry's strength. He puts no limit on what he will do. If a problem becomes difficult, he doesn't back down. Instead he prepares himself better. Jerry's relentlessness in pursuit of scientific truths is well known. Less well known is his relentless pursuit of his advisors. Before he finished his master's, I moved from Tennessee to Southern Illinois University. Jerry followed. Before Jerry had fully finished his Ph.D., Joe Smith moved from Penn State to the University of Chicago. Jerry followed. The stimulating atmosphere of Penn State was thus succeeded by the distinctively exciting atmosphere of Chicago, where Jerry thrived under Joe's tutelage doing a postdoctoral project involving olivine and garnet.

While at Chicago, the telephone company mounted a campaign to sell colored telephones in lieu of black. Their theme was that the telephone should match the decor of the room. A saleslady telephoned the Gibbs apartment. As luck would have it, Jerry rather than Nancy, his wife and faithful partner for almost 25 years, answered the phone. In the course of the sales pitch, the lady asked two questions, "Where is your telephone?" Jerry replied, "In the kitchen." She then asked, "What color is your kitchen?" Jerry replied "Black." The sales pitch ended.

Contrary to rumor, Jerry and I have gone out in the field. At Tennessee it was almost frequent. He was always borrowing my steel-shafted Estwing hammer, which was

starting to lose the leather rings that formed its handle. I told him, "thou shalt not covet thy field partner's hammer." Finally, to make an honest man of him, I sold him the hammer for a dollar. Our next time in the field, he brought along my former hammer, its handle all beautifully repaired and restored. At our first stop, he hit a rock with it and the hammer broke in half, steel shaft notwithstanding. Neither was I. Withstanding I mean. Rarely have I laughed that hard.

Jerry's contributions to the science of mineralogy are immense and varied. I won't attempt to summarize them. They certainly fill the intentions of the 1936 Council of the Mineralogical Society of America that a gold medal, designed in honor of Colonel Washington Augustus Roebling, be awarded for important contributions to the mineralogical sciences. Equally important is the marvelous teaching and training that Jerry has given his stu-

dents. Relative to teaching, Jerry recently received national recognition from the Council for the Advancement and Support of Education. Among 400 candidates nominated by their colleges and universities throughout the United States and Canada, nine gold, seventeen silver, and thirteen bronze awards were made. Jerry received the Silver Medal Award. It is no coincidence that many of Jerry's students are now at the forefront in several areas of mineralogy. And soon their students will be.

My wife, Louise, and I have never quite decided whether Jerry, whom we know as Chips, is like a son or younger brother to us. In either case, we hold him dear and are overjoyed at this singular honor that has come to him. Mr. President, Ladies and Gentlemen, I am delighted to present to you, Gerald V. Gibbs, the Roebling Medalist for 1987.