THE REGOLITH – A VIEW FROM WITHIN

Richard A. Eggleton

Geology Department, Australian National University, Canberra, ACT 0200

After 25 years of regolith teaching and research above a 20-year profile of fresh geology, I am, apparently, suitably placed to pontificate about the past and the future of regolith science. 'Pontificate' derives from the Latin *pons*, a bridge, so I stand here on a bridge, looking one way at 25 regolith years flowing steadily away, and then the other way to the bright young stream coming down from the future. In my talk, I will emphasize the things I believe are important in our science. By no means all of them; first the ones I was involved in, then some that I hope you will become involved in.

I was most fortunate, in 1980, to return from a sabbatical leave in Arizona armed with the knowledge and skills to use a transmission electron microscope, only to find a shiny new one in the Research School of Chemistry at ANU, and an invitation to use it as much as I liked. The first part of my talk will be on the work that my students and I did with this machine, for we were able to look deep within the regolith, down to the atoms that make up its minerals.

In the second, and much shorter part, I will comment on teaching. In 1960, when I started my PhD in Wisconsin, computers were pretty well frontier tools. My teaching life has evolved hand in hand with the evolution of the computer, and I think I am as computer aware as any current scientist, though nowhere near as versatile with desk-top and lap-top as most of you. I rather compare the computer age to the printing age of an earlier century, and will talk a little about my attitude to computer-aided teaching.

Finally, as is de rigeur for Emeritus Professors, I will gaze into the regolith Palantir (Tolkein 1954) and try to see, not what its masters tell us we should do, but what I hope the future of regolith science might look like.

REFERENCES
TOLKIEN J.R.R. 1954. *The Lord of the Rings*, Book 3, Chapter 11: The Palantir. George Allen and Unwin.