WHERE’S THE EGGNOG?
(AND OTHER DIFFICULT QUESTIONS ABOUT SCIENCE)

Nicholas S. Wigginton

Pursuing a PhD in the sciences is a strange time in one’s life, especially if you’ve been in graduate school for a while. Your schedule is hectic, you’re traveling more frequently to conferences, and you’ve maybe even started writing a manuscript or two. Yet with the passing of this holiday season, I am reminded of another reason for the oddness of grad school: figuring out how to explain your research to those outside of science. Very rarely does this happen with other professions. No one has to explain what a teacher or doctor does. But think about the questions you get from friends and family when you first tell them you’re off to grad school: “You’re going to college again?” “What do you mean you get paid to go to school?” “Five more years, are you crazy!!?”

The questions get different as you go on, and answering them gets more challenging. “When are you going to finally graduate?” “You’re still in school but you don’t take classes?” “So what exactly are you researching?”

The most difficult to answer, at least for me, has always been the last one. During my first couple of years, I thought there were only two ways to answer this question. One approach was jumping right into the subject matter, which subsequently bored the other person in the first few seconds and killed the momentum of the conversation. The usual glassy-eyed response from suddenly drowsy family members to my ramblings was “That’s nice; say, where’s the eggnog?” Other times I was self-conscious about sounding pretentious or overeducated, so I just simply uttered a quick one-liner like “I study science/geology/chemistry/etc.” After that, it was usually me who dashed off to the eggnog, ashamed and embarrassed that I wasn’t able to take pride in what essentially took up the majority of my life at the time.

It is obvious to me now that neither of these tactics is helpful, but it took me some time to reach that conclusion. Just like one’s growth as a scientist, there is a learning curve in explaining your research to non-scientists. Over time I began to realize that these answers did not help the questioner learn more about me or my research. Granted, nobody wants to hear about the difficulties of your sample preparation or how you are reanalyzing your results by accounting for crystal-field effects. But the opposite is also true: an impersonal, generic answer can be unsatisfying and even insulting to them. Therefore, there is a fine line between making something easy to understand and overdoing it.

The theme of breaking down a topic into terms that are easy to digest for a wide audience is not foreign to this magazine. In Elements, our community disseminates its collective knowledge, and even though the average reader may not know much about zircon or toxic metals, they most likely have enough scientific background to learn a bit from the great reviews presented in each issue. But consider this: how would the authors of the October 2007 issue, for example, write about the critical zone if they knew their grandmother was going to read it? What if policymakers needed to make decisions based on the content? Could undergraduate students learn from it? Understanding your audience is perhaps the most important part of any type of scientific writing, and discussing science with unfamiliar friends and family is no different.

With that said, how does one prepare to explain their research in a casual, coherent manner? What should you aim for is simplicity without talking down to your audience. What you should aim for is simplicity without something easy to understand and overdoing it. The new guide to mineral species. The latest, up to date listing of minerals available in a single CD, with over 4170 valid mineral species listed and described, with more than 6700 mineral images!

New Features: comprehensive data that provides detailed chemical compositions, physical and optical properties, plus data on crystallography, radioactivity, nomenclature etc. for virtually every known mineral, compliments of WebMineral.com! Operates under both Macintosh and IBM-Window operating systems.

Best of All: The CD is just $49.95 plus $5.00 shipping & handling anywhere in the world. For those who missed Edition I (normally $69.95), we offer a special CD package of both editions for just $89.95 plus $5.00 shipping & handling! Available only from: Excalibur Mineral Corporation 1000 N. Division Street – Pekeskill, NY 10566 - USA www.excaliburmineral.com

Nicholas S. Wigginton
Virginia Tech

Elements

February 2008