Palynological Myths: Monitoring Contamination Of Fossil Pollen Preparations

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Modern pollen occasionally appears in fossil preparations and can be detected by the contained cytoplasm and/or pristine condition and often bright stain. The sources include pollen carried by air currents through open windows, and contaminated reagents including water and dirty glassware. The usual response to these potential sources of contamination is, besides closing the window, to filter the air entering the preparation lab and use chemically pure reagents including distilled water. This may be an expensive solution to a non-problem. In my windowfull lab, contamination is rare and I prove it by running a control.

The control is done by simply preparing a sample containing only the *Lycopodium* spike tablet as a member of a sample batch of fossil sediment, i.e., running a "blank" sample. My preparation uses technical grade reagents and tap water. After mounting the concentrates, in the control slide I count 1,000 *Lycopodium* spores and other pollen and spores; usually there is no pollen. From this I conclude that the rate of laboratory contamination of fossil slide preparations is way below 1 per thousand fossil pollen. It's not what comes in the window but what gets under the coverslip that counts!

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