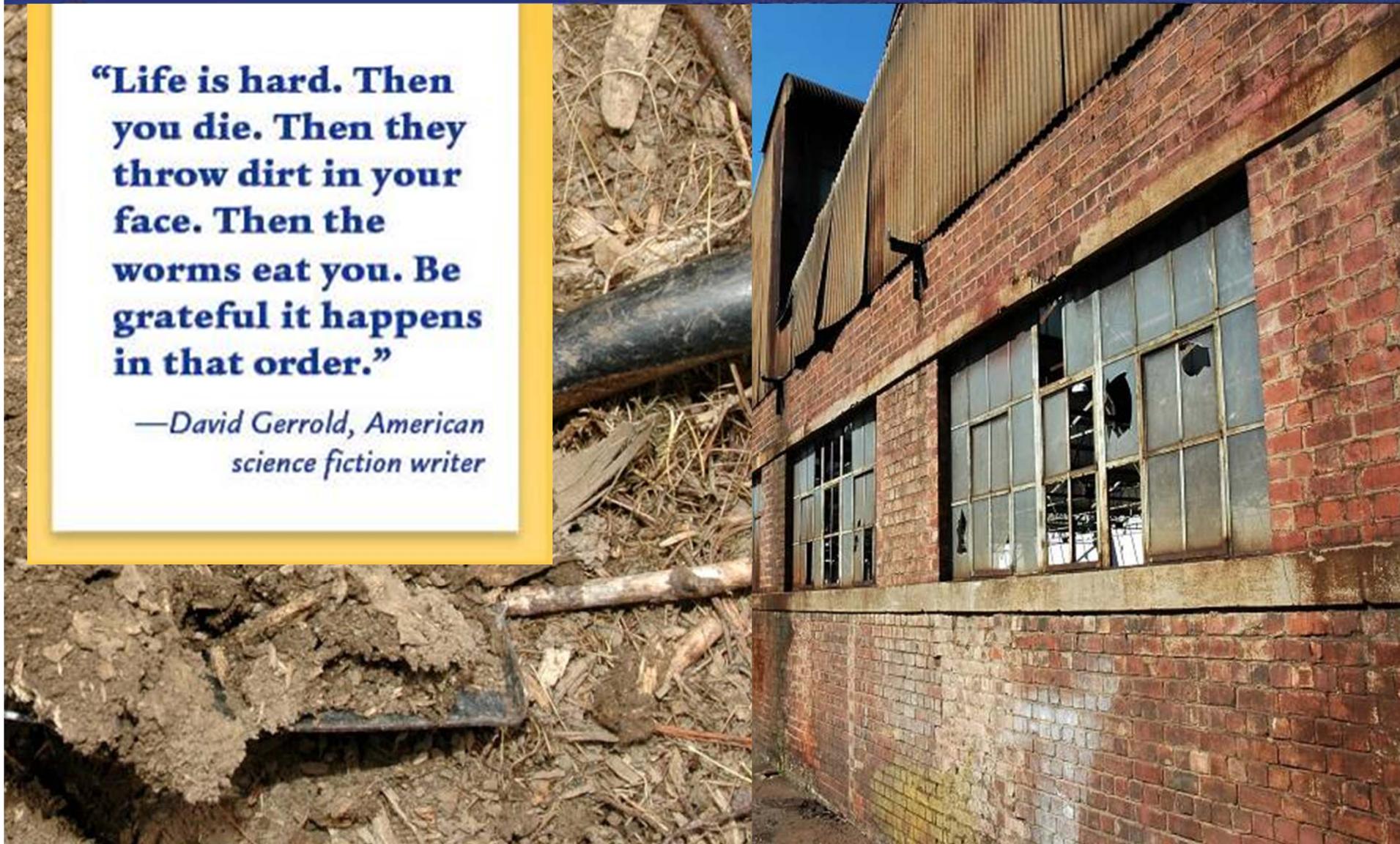


Chapter 10

Soil and Glass Analysis

“Life is hard. Then you die. Then they throw dirt in your face. Then the worms eat you. Be grateful it happens in that order.”

—David Gerrold, American science fiction writer



Forensic Geology

The legal application of earth and soil science

Characterization of earthen materials that have been transferred between objects or locations and the analysis of possible origin or sources

Forensic Geologist Tools

Binocular microscopes

Petrographic microscopes

X-ray diffraction

Scanning electron microscopes

Microchemical analysis



Forensic Geology History

1887–1893—Sir Arthur Conan Doyle wrote about scientific ideas and techniques for solving crimes in his writings of Sherlock Holmes. This included information about soil and its composition which had never actually been used.

1893—An Austrian criminal investigator, Hans Gross, wrote that there should be a study of “dust, dirt on shoes and spots on cloth.” He observed, “Dirt on shoes can often tell us more about where the wearer of those shoes had last been than toilsome inquiries.”

Forensic Geology History, *continued*

1904—Georg Popp, a German forensic scientist, presented the first example of earth materials used as evidence in a criminal case, the strangulation of Eva Disch.

1910—Edmond Locard, a forensic geologist, was most interested in the fact that dust was transferred from the crime scene to the criminal. This helped to establish his principle of transfer.