

## BOOK REVIEW

Susan M. Ballou,<sup>1</sup> M.S.

### Review of: *Forensic Science: The Basics, 2nd edn.*

**REFERENCE:** Siegel JA, Mirakovits K. *Forensic science: the basics, 2nd edn.* Boca Raton, FL: CRC Press, Taylor & Francis Group, 2010, 525 pp.

The second edition of *Forensic Science: The Basics* by Jay A. Siegel and Kathy Mirakovits instills an appreciation for science by captivating its readers with case examples and numerous photographs. The layout provides a smooth flow from the criminal case, to the experiments, to the chemical, biological, or physical application to the evidence. In a subliminal fashion, students learn the periodic table, cell biology, and the motion of matter.

Using this text, science teachers have a ready curriculum at their fingertips with experimental details primed for application. New trainees in the forensic science laboratories have already received this level of education but in a pinch, some of the chapters could be incorporated into a laboratory's general training program. The users of this text should be aware that errors are present that a more detailed review of the text would have caught prior to publication. Not major detractors, just annoying to those with forensic science experience. The annoyance becomes a concern when these instructions are placed in the hands of individuals or teachers new to the forensic science profession. Below are listed some of the detractors for general evaluation:

- Page 17: Figure 1.3, The "Optimal Education" column for career choices lists the computer forensic scientist as having a Ph.D. in computer science or computer engineering. The Scientific Working Group on Digital Evidence is in the process of updating their educational requirements for individuals interested in digital and multimedia, and the inclusion of a bachelor's degree for the profession was undecided, a Ph.D. was never considered. Listening to the private sector, their interest for new hires is experience and a bachelor's degree as a nice addition. Therefore, the inclusion of the Ph.D. requirement for this profession is seen more of a selling point for academia and not a true representation of the field's current educational requirement.
- Page 27: Under the "Matching" of the "Test Yourself" section. If all answers are to be used the only option for "15. Determines competency to stand trial" is c. Entomology. This statement could be justified in so many ways with tongue-and-cheek comments but in reality errors are a concern to the student doing self-test activities.
- Page 32: The bottom of the page enters into the crime scene activities, and the statement "There are three ways that crimes are discovered" grabbed my attention. Thinking about criminal

case history and the corresponding submitted evidence, there is another option where the police are notified of suspicious activity by a concerned citizen who is neither the witness nor victim. For example, a decomposed body was located by emergency personnel or police because of someone noticing the stench permeating from the apartment or house. The deceased could have been the victim of an assault, natural death, or unfortunate accident and because the deceased had no living relatives or concerned friends, this person's absence went undetected. The argument that the neighbor or passing citizen would be considered the victim because of their subjection to the stench is an option, except this option does not fit the provided text.

- On page 63 near the bottom of the page, the text offers a "supposed" scenario for testing for the presence of blood and describes the phenolphthalein test stating; "cutting out a few threads of the shirt that have the stain on them and adding the reagent to the threads." Not since the use of Lattes crust or blood protein determination is there a need to cut the actual evidentiary sample. Current training identifies the use of sterile swabs slightly moistened and applied until transfer is noted thereby allowing the required transfer of suspect fluid without destroying evidence. The larger concern is that the text statement supports the suggestion that destruction of evidence is OK when trying to uncover information.
- On page 83, the offered experiment under "Something for You to Do" states the computer calculates area as "peaks" and then further along in the text the computer calculates the area as "counts." To the novice, the question would be how to convert from peaks to counts, or counts to peaks to provide the answer to the posed question. Although the point of the exercise is to apply basic math, the inaccuracy of the unit specification can cause just enough confusion to stop someone from finishing this exercise.
- On page 147, the banner heading "National Institute for Standards and Technology (NIST) and the National Crime Information Center (NCIC)" has an error in the NIST name, the "for" should be "of." A minor point, true, but a larger concern loomed in the paragraph underneath this heading. The paragraph implied that these two agencies (NIST and NCIC) are the companies that failed to use standard protocols. Not until page 162 is clarification offered as what was implied and establishes the NIST and NCIC focus to set standards.

The "Short Answer" section on page 174 is missing, a major portion of the puzzle. After reviewing the chapter and returning to the Short Answer section, I noted that question #26 is indeed missing the footwear impression casts A-C to complete the activity. Same for question #27, the necessary inked tire tread prints are

<sup>1</sup>Forensic Sciences, Office of Law Enforcement Standards, NIST, OLES, 100 Bureau Drive, MS 8102, Gaithersburg, MD 20899-8102.

missing. This is an example of another confusion point for students trying to evaluate their understanding of the provided material.

The chapter on arson and fire debris analysis refers back to the old teachings on how to identify the point of origin. Much has changed in this area and should have been included in the discussion.

Other issues are present further in the book but as noted earlier none are major detractors that would derail the profession. The overall consensus is this is an excellent, all encompassing text, perfect for captivating the next generation of forensic scientists.