

## Bloodstain Pattern Analysis with an Introduction to Crime Scene Reconstruction, Second Edition

Reference: Tom Bevel and Ross M. Gardner, *Bloodstain Pattern Analysis with an Introduction to Crime Scene Reconstruction*, Second Edition, CRC Press: Boca Raton, FL, 2002, 391 pages, ISBN: 0-8493-0950-6, \$89.95

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The 2002 edition is similar in construction to the first edition published in 1997. The book is well organized with new photographs, charts, and flow charts used to more completely illustrate the concepts and methods discussed in each chapter. References are included at the end of each chapter, simplifying research on particular topics. The appendices have been expanded to include a section on accuracy, precision, and significant digits. The citation error mentioned in a review of the first edition has been corrected.

Chapter one, "Bloodstain Pattern Analysis, its Function and a Historical Perspective", has a new section on *Modern Works in Bloodstain Pattern Analysis*, as well as three additional references.

Chapter Two, "Crime Scene Analysis and Reconstruction", is now 48 pages long with a new section, *Application of the Scientific Method in the Reconstruction Process*. Bevel and Gardner propose that crime scene reconstruction should follow the scientific method. Although not elevating crime scene reconstruction to a science, they do propose that data gathered in the investigation should be methodically and rigorously tested. This data should be viewed within a particular hypothesis, thereby giving "logically deriving explanations for specific events".

There are a number of excellent flow charts within the chapter describing methods of event analysis, as well as forty-two references for the material presented.

Chapter 3, "Terminology", includes two terms not described in the first edition. *Fly spots* and *saturation stains* are the two new terms presented. Photographs of fly spots and saturation stains are also included.

Chapter 4, "Understanding the Medium of Blood", contains a new section on the *Reaction of Liquid Blood to Force*. There are also a number of color photographs that have been added which clearly illustrate the effect of target surface on stain shape. All of the color photographs found in the previous edition under the chapter "Documenting Bloodstains" have been moved here. There are photographs of forward and back spatter production, as well as impact and back spatter patterns following multiple woundings. Some excellent photographs of expirated blood are provided. Several crime scenes with various categories of bloodstains enhanced with luminol conclude the photograph array.

Chapter 5, "Determining Motion and Directionality", includes five new photographs with accompanying descriptions in the expanded section on *Recognizing Blood Trail Motion*. Three new photographs with accompanying descriptions are added in the section *Determining Motion from Wipes and Swipes*. A photograph depicting two distinct blood flows demonstrates the concepts of the section entitled *Flows*.

In Chapter 6, "Determining the Point of Convergence and the Point of Origin", the section on *Stain Measurement* has been expanded. There are new photographs of an ellipse template, micrometer, ruler, loupe, and drafting dividers, and their uses in stain measurement. A method of measuring bloodstains using drafting dividers is discussed in some detail and illustrated in photographs.

Several sections in Chapter 7, "Evaluating Impact Spatter Bloodstains", have been improved. There is considerable new discussion on distinguishing spatter from contact stains and several new photographs included for illustration. Bevel and Gardner have also included several new photographs in the section on spatter resulting from gunshots.

Chapter 8, "Characteristic Blood Patterns", has been expanded. There are new photographs depicting various types of stains, as well as photographs depicting the documentation of stains on clothing are included.

In Chapter 9, "Documenting Bloodstains", the section on *Presumptive Tests* has been expanded to include the "One Step ABacard Hematrace". *Enhancement Techniques* has been expanded to include a discussion of leucocrytal violet (LCV) and fluorescein. Formulae for these reagents, as well as instructions for their use, are described. The section on *Bloodstain Pattern Photography* has been expanded, with several new photographs illustrating methods of overall and close-up photography of bloodstains.

Chapter 10, "Documenting the Reconstruction of a Crime", has been expanded. The section on *Event Analysis in Narrative Format* is quite comprehensive. Bevel and Gardner include several flow charts depicting the scientific method template.

In Chapter 11, "Automation Applications in Bloodstain Pattern Analysis and Crime Scene Reconstruction", a section on *Building Demonstrative Presentations using Computer Resources* has also been added.

In Chapter 12, a section on using demonstrative aids in court has been included.

There are few books in print specifically dealing with the area of bloodstain pattern analysis and crime scene reconstruction. The second edition of the book is well written and easy to read. This second edition by Bevel and Gardner should be a standard reference for crime scene investigators and bloodstain pattern analysts.

Robin M. Bratton, Director  
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