

# Bloodstain Pattern Analysis in Forensic Investigation

provides a detailed understanding of one of the several specialties in the field of forensic science. Readers will experience a different approach of studying bloodstain pattern analysis in this book as a large number of illustrations of real crime scene related evidence articles have been presented along with crime scene visit findings.

This is the first Indian book dedicated solely to educate the first responders, the investigation officers, in the simplest way possible about bloodstain pattern found deposited on crime spot so that they can properly photograph and preserve the otherwise neglected yet very crucial physical evidence. It is equally useful for the law enforcement personnel, crime scene investigators, students of forensic science and forensic medicine, lawyers as well as the judicial officers to encourage awareness about this important sub-discipline.

Carefully selected illustrations of blood-stained physical objects related to the blunt weapon, sharp weapon, accident and firearm assault, along with important findings related to various crime scene visits done by the author, give readers an insight. This book develops skilled interpretation about gathering information from the body of the deceased person and related physical evidence articles about the sequence of events in a particular crime assault type based on deposited bloodstains.

The book features identification and characterization of liquid or dried blood stains to reveal staged or genuineness of physical evidence, along with the type of weapon used in the offense and the persons involved in the crime.

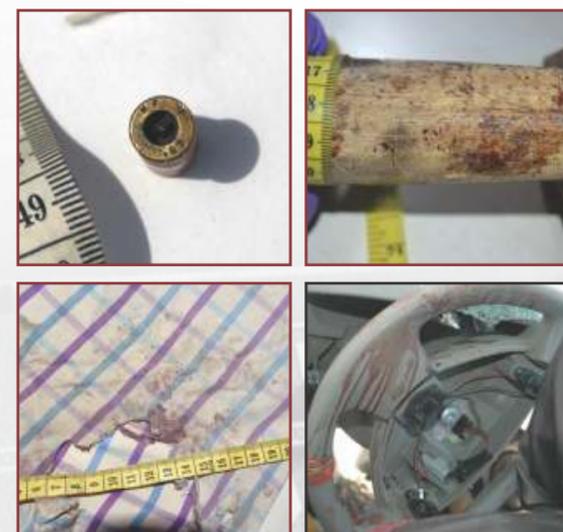
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is a serologist and crime scene investigator, and currently Assistant Director, State Forensic Science Laboratory, Rajasthan. He started his career as forensic scientist in 2007 as crime scene unit in charge when the concept of district-level forensic crime scene unit establishment started functioning in Rajasthan. Along with field experience, he has years of practical experience of working and examining thousands of bloodstained evidence articles received in serology unit. This book is an amalgam of his experience in crime scene fieldwork as well as his contribution inside the white-walled laboratory.

He has been given the 'Best Scientific Paper Award' in oral session in crime scene by Directorate of Forensic Science Services, Ministry of Home Affairs, Government of India, in 2010. He has participated in various training programs for police personnel and attended various short courses on 'Crime scene management'. This book is his sincere contribution in the field of forensic bloodstain pattern analysis.

Bloodstain Pattern Analysis in Forensic Investigation

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Hemraj Verma

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A graphic at the top of the page shows a white surface with various blood splatters and stains. Some are large and dark red, while others are smaller and lighter. The background behind the splatters is a gradient from light orange to dark red.

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ISBN: 978-93-90709-09-0

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First Edition: 2023

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Published by **Satish Kumar Jain** and produced by **Varun Jain** for

**CBS Publishers & Distributors Pvt Ltd**

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Printed at Gokul Offset Pvt. Ltd., Okhla Industrial Area, New Delhi, India



## Preface

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**T**he idea of writing this book arose from the curiosity about the limitations of evidentiary information on bloodstained garments and weapons received in a forensic laboratory, which is otherwise neglected.

This book is designed to serve as a text for a complete one year course in bloodstain pattern and importance of crime scene management, though it can easily be adapted for short courses aimed at training police officers, judiciary and forensic students. This approach enables researchers, students and trainees a greater degree of flexibility in terms of using this book as a reference material.

Our knowledge in bloodstain pattern has been gradually expanding. There are various books dedicated to bloodstain pattern analysis. Science is a gradual process of study from chaos to a systematic order of understanding, and this book is an innovative contributory step in this expanding field, which is an outcome of my 14 years of documented and preserved fieldwork related to myriad of different types of crime-scene visits and thousands of exhibit-processing works inside the laboratory.

This book will equally be helpful as a reference manual for the crime scene investigators for bloodstain pattern types as well as crime scene management. Many such investigators have been of assistance to me during crime scene visits and inside the laboratory.

I express my gratitude to my dedicated colleagues in the forensic science laboratory, though lack of space makes it hard to acknowledge all of them individually.

Although I take the entire responsibility of my work, yet I wish to acknowledge a few—my friend Devesh Mahla, my mentor Dr Nupur Mathur, Dr SS Daga and Dr BC Ravindra for their moral support. I dedicate this volume to my late grandparents and also to my family who motivated me to complete this book despite the hardships during this project work. I am also looking forward to the support of Dr Ajay Sharma and Dr Rajesh Kumar as I will rely on them for further expansion of this project work as a contribution in the field of forensics. My thanks and appreciation to all the police personnel and practitioners of forensic medicine who have shared their knowledge and experience. Finally, I express my feelings of gratitude to the 'supreme power' whose excellence far exceeds my vocabulary.

**Hemraj Verma**





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