

Table of Contents

Table of Contents	1
IABPA 2008 Officers	2
President's Message	3
High Speed Digital Video Analysis of Bloodstain Pattern Formation from Common Bloodletting Mechanisms <i>Terry L. Laber, Bart P. Epstein, Michael C. Taylor</i>	4
Notice of the Opening of the Public Comment Period for the SWGSTAIN Draft Document Entitled "Scientific Working Group on Bloodstain Pattern Analysis: Recommended Terminology"	13
Proposed Changes to IABPA Bylaws	18
2008 International Association of Bloodstain Pattern Analysts Annual Training Conference	21
Abstracts of Recent BPA Related Articles Published in the Scientific Literature	26
New Book Publication	26
Bloodstain Pattern Analysis in the News <i>Alexei Pace</i>	27
Organizational Notices	28
Training Opportunities	29
Editor's Corner	31
Past Presidents of the IABPA	32
Associate Editors of the IABPA NEWS	32

2008 I.A.B.P.A. Officers

PRESIDENT

LeeAnn Singley

copsci2@msn.com

Vice President, Region I

Pamela Bordner

pam.bordner@state.or.us

Vice President, Region III

Iris Dalley

irisd@osbi.state.ok.us

Vice President, Region V

Andre Hendrix

andre.hendrix@zeeland.politie.nl

Secretary / Treasurer

Norman Reeves

norman@bloody1.com

Legal Representative

Mark Seiden

markseiden@markseidenlaw.com

Vice President, Region II

John Forsythe-Erman

jon.forsythe@rcmp-grc.gc.ca

Vice President, Region IV

Craig Stewart

craig.stewart@jus.gov.on.ca

Vice President, Region VI

Mark Reynolds

mreynolds@anhb.uwa.edu.au

Sergeant at Arms

Brian Kennedy

b.kennedy@bloodscene.com

Historian

Herbert MacDonell

forensiclab@stny.rr.com

PRESIDENTS MESSAGE

Well, June is here and for me, living in Pennsylvania that means the warm days of summer have arrived. It also means that our 2nd European IABPA conference is fast approaching as we get prepared to meet in Zurich, Switzerland, July 2-4. What exciting times these are for the IABPA as our worldwide membership continues to grow. The discipline of Bloodstain Pattern Analysis is becoming more and more recognized across the globe as a vital component of criminal investigations and the IABPA has helped to assist in the expansion of the discipline by providing an avenue for the exchange of valuable information for its members. I look forward to seeing new and old members alike as we gather in Europe once again.

I am also reminded though, that cool fall days (and maybe some snow) await us as we assemble in the Rocky Mountains in Boulder, Colorado, October 7-10. If you haven't done so, please check out the information continually being updated on our website with regard to this year's annual meeting. The conference team has been hard at work preparing what I believe will be a most informative conference. Once again, workshops will be provided for all who attend, in addition to the general session of presentations. Conference registration forms, hotel information and rates, and conference workshop information is provided on the website and this issue of the NEWS. If you are planning on attending, consider making your room reservation early to ensure availability. Also, consider contributing to the success of the conference by sharing your research or case experience at the podium. I am sure the conference team will welcome your involvement.

The October conference will also be the location for our annual business meeting. A quorum of members is necessary for voting purposes and to carry on the organization's business so I encourage you all to plan on attending this important component of the conference. At this meeting, we will be voting on changes to the Bylaws. As per the Bylaws, all proposed changes must be mailed to the voting members at least 60 days prior to the annual meeting. In this issue, you will find proposed changes that have been generated to date by the Bylaws Review Committee. Please carefully review the changes and come prepared to discuss them. In addition, I am calling for other agenda items. If you have anything you wish the association to address at the annual business meeting, kindly contact our Secretary/Treasurer, Norm Reeves, or myself to ensure its placement on the agenda.

One final reminder; all applications for membership and promotion in the IABPA are due 60 days before the annual conference making this year's cut off August 7th. Forms are available for download on our website. It is important to remember that promotion to full member is NOT automatic and a promotion application MUST be filled out and submitted to be considered for vote at the next meeting.

A full slate of events awaits us as we enter the second half of 2008. I look forward to sharing in the continued fine work of the organization and its members.

Until we see in each other in Zurich or Boulder....

Take care,

LeeAnn Singley
President, IABPA

HIGH SPEED DIGITAL VIDEO ANALYSIS OF BLOODSTAIN PATTERN FORMATION FROM COMMON BLOODLETTING MECHANISMS

Project Report, MFRC Project No. 06-S-02

Terry L. Laber¹, Bart P. Epstein², Michael C. Taylor³

Abstract

Working on the premise that an understanding of the dynamics of a bloodletting event is critical to the sound interpretation of the resultant bloodstain pattern, a set of over 500 individual high speed digital video clips of common bloodletting mechanisms has been assembled. These include single blood drop formation, impact spatter, gunshot spatter, expiration, cast-off, projected and contact blood staining. These video sequences were evaluated to better understand the basic dynamics of bloodletting events. This set of high speed video sequences is available for distribution to the forensic science community via the Midwest Forensics Resource Center (MFRC) website. It is hoped that the outcome will be a significant contribution to the strengthening of the science underpinning bloodstain pattern analysis.

Introduction

The study of bloodstain patterns is essentially a study of the aftermath of a blood transfer event. Bloodstains form on two-dimensional surfaces and from their size, shape and distribution, inferences can be drawn as to the mechanism that gave rise to their formation.

The blood patterns that form from such events often have recognizable characteristics that permit them to be classified into pattern types. It follows then that with a suitable understanding of these characteristics, investigators can draw certain inferences about the events and the mechanisms that led to the formation of the pattern.

However, a bloodletting incident is often a complex set of events which take place in three dimensional space. Blood volumes which are transferred generally undergo some change prior to their subsequent deposition on a surface. For example, a pool of blood is broken up into droplets of varying size which are projected outwards when the volume is subjected to an impact force. It is our contention that an understanding of the dynamics of these changes is critical to the sound interpretation of the resultant bloodstain pattern.

To date, investigators have mainly relied on observing many such patterns, coupled with laboratory simulation experiments, to build up experience in the recognition and classification of bloodstain patterns. Relatively little however, has been documented about the dynamics of the blood transfer event.

¹ Minnesota Bureau of Criminal Apprehension, (BCA) Forensic Science Laboratory, 1430 Maryland Ave East, St Paul, MN 55106

² Criminalist, Forensic Consultant, 4520 Sedum Lane, Edina, MN 55435

³ Institute of Environmental Science and Research Limited (ESR), P O Box 29-181, Christchurch, New Zealand. (Author for correspondence: michael.taylor@esr.cri.nz)

Typically, individual transfer events take place over a very short period of time. This, combined with the often very small size of transferring droplets (which could be spheres of less than 1 millimetre diameter), mean that simple visual observation or standard photography of the event is insufficient.

Some work has been done with high-speed film cameras [1] - [3], regular video [4] and stroboscopic lighting [5]. One of these [1], which until recently was the benchmark for such studies, used a film camera at 4000 frames per second. Although this was a definitive study, it was not an attempt to systematically document the major blood transfer events.

The fact that little in the way of photographic information has been produced since, reflects in part the fact that high speed film cameras are cumbersome to use, require significant lighting, are expensive to run and lack flexibility. With the advent of digital cameras, the photographic world has been redefined. Now, high-speed digital video cameras are available with impressive speeds and resolution. The options for data analysis are extensive and the data capture process is relatively straightforward.

In short, the door was open for a systematic study of blood transfer events in a way that has not been achieved to date. This project aimed to take the first steps in the task of studying and documenting the three dimensional dynamics of the major blood transfer events. It is hoped that this will lead in turn to a new understanding of even the most common bloodstain patterns encountered by crime scene investigators the world over. It was also anticipated that some hitherto unknown aspects of blood transfer will surface and invite on-going investigation.

Project Objectives

The specific objectives chosen for the project were:

1. *To analyse and document the dynamics of common blood transfer events using high speed digital video (HSDV)*

These events were to include but not be limited to:

- The dynamics of the collision between a blood drop and a hard surface
- The dynamics of the collision between a blood drop and a porous surface
- Cast-off from a moving bloodied object
- Impact spatter from beating, kicking and stomping
- Impact spatter from a shooting

2. *To compile a set of video clips of common blood transfer events that can be used by instructors in a bloodstain pattern course*

A series of experiments was designed to meet these project objectives. These were based on the experiments typically performed by students in a basic bloodstain pattern analysis course. It was anticipated that this approach would yield the most valuable output in terms of teaching aids for instructors of this type of course.

Procedures

Filming for this project was primarily done at the Minnesota Bureau of Criminal Apprehension (BCA) Forensic Science Laboratory in the USA. Some additional experimental work was completed at the Christchurch laboratory of the Institute of Environmental Science and Research (ESR), New Zealand [6]. Work on the project commenced in early October 2007. The early part of the project time was spent on setting up and testing the camera and its associated software, organizing laboratory work space and acquiring consumables and associated equipment required for the experiments.

As anticipated, lighting was a critical issue. Two theatre lights were rented to supplement the available lighting equipment. The resulting setup was adequate for most experimental needs but will need improving for future work where resolution of very small particles is required. The setup for each experiment involved various techniques to maximise available light, provide high contrast images and where possible calibrate the scale of the experiment.

Each experiment was assigned a unique number sequence that reflected in part the conditions of the experiment. The first number in the sequence was the section number of the relevant section of the Laber and Epstein BPA laboratory manual [7]. For each experiment, video sequences were captured and stored on computer and backed-up on portable hard drives. Bloodstain patterns created on targets used in each experiment were collected and preserved. This was done to provide opportunities to make the vital link between the mechanism of the events videoed and the characteristics of the resulting patterns. Where possible, two to three replicates of each experiment were performed.

Human blood was drawn from laboratory donors, mixed with an anti-coagulant and used within 72 hours for all the experimentation. Blood was stored refrigerated when not in use and warmed to room temperature during use. A wide range of target surfaces such as cardboard, building materials, carpet and various types of clothing were used for the deposition of blood and blood spatter. Experiments were set up using standard laboratory equipment as well as some specially built devices for producing and capturing blood spattered by different mechanisms.

The camera used was a Photron Fastcam-SA1 High Speed Digital Video (HSDV) camera. Lighting was achieved with the aid of two ellipsoid beam theatre lights with 750 Watt tungsten lamps and, where necessary, two additional 1000 Watt non-focused quartz halogen light sources. Regular Nikon lenses were attached to the camera, with most video captured using either a Tamron 90 mm macro lens or Micro Nikkor 55 mm or 105 mm lenses. Apertures between f4 and f11 were used depending on available light at the shutter speed chosen to minimise motion blur. Some experiments were conducted under an Olympus stereo microscope model SZH with C-mount camera adaptor and focusing dual fiber-optic illuminators.

Various blood projection devices, such as those commonly used in basic blood pattern training courses (e.g. hammer, modified rat trap, tire iron, baseball bat, etc.) were employed. Firearms related experiments were conducted in the firing range of the Minnesota BCA with the generous assistance of the BCA firearms section staff.

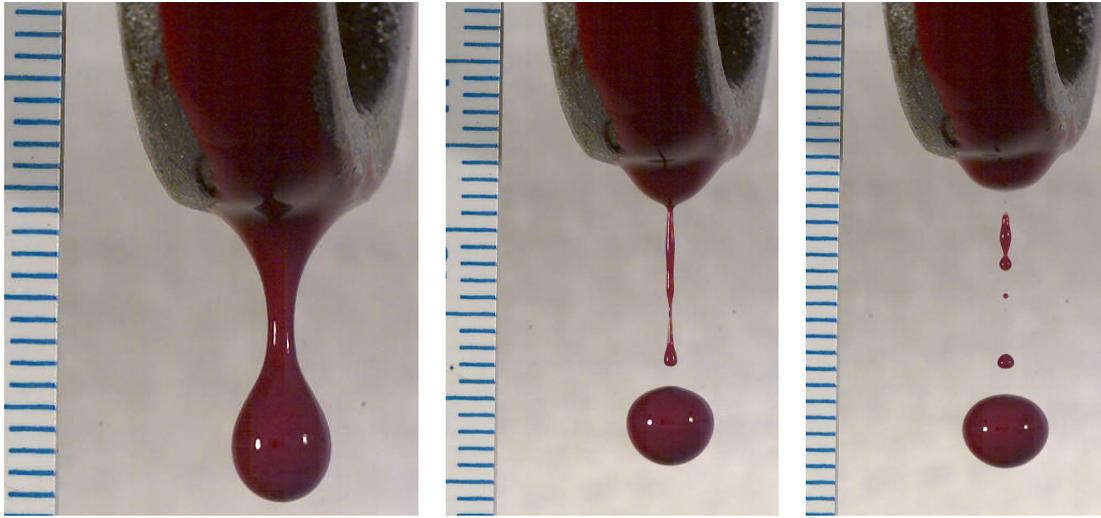
Results/Discussion

Most of the blood events studied were highly complex and variable. Therefore, the collection of video sequences, at best, only represents a set of examples of the events in question. Nevertheless, there was much in these sequences that provided valuable data on the mechanism of blood events. Over 500 video sequences were collected. These represented the following blood events:

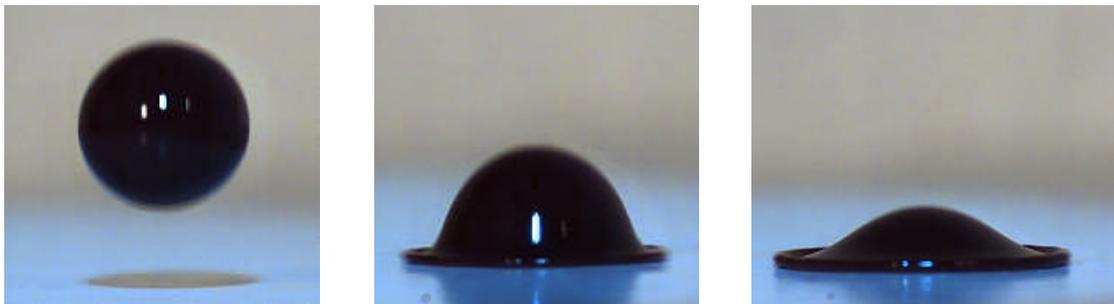
- Passive drop formation from five different objects
- Passive drops of three different volumes free falling from 1 to 9 metres
- Passive drops from different heights impacting different surfaces
- Passive drops impacting three different surfaces at known angles from 10° to 90°
- Impact spatter resulting from blood dripping into blood
- Impact spatter resulting from the impact of five 'weapons' on bloodied surfaces
- Impact spatter resulting from the stomping, slapping and flicking of blood
- The formation of impact spatter stains on cotton fabric at various angles
- Gunshot induced blood spatter produced by three different caliber handguns at up to four distances from the blood source
- Swing cast-off from five different objects
- Cessation cast-off
- Large volumes of blood dropping from four heights
- Large volumes of blood projected from four heights and at two angles
- Projected blood from coughing and exhaling through the nose and mouth
- Contact bloodstaining produced by fingers, various fabrics and hair

AVI files using the Cinepak codec compression have been prepared from a representative set of video clips from the total collection. Examples from the video collections are presented below:

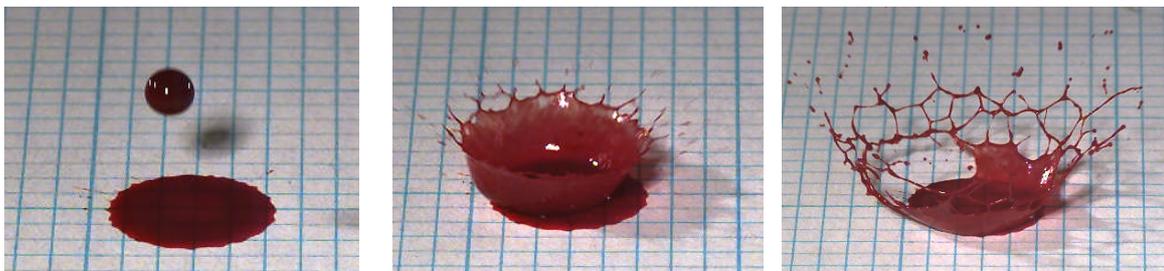
Passive drop formation - Formation of a drop on the handle end of a wrench:



Passive drop impact - Single drop of blood falling onto smooth cardboard:



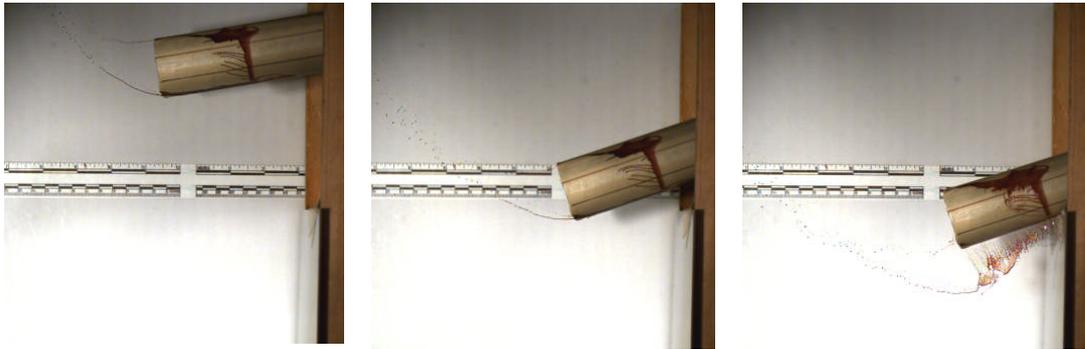
Blood into blood - Single drop of blood falling into blood pool:



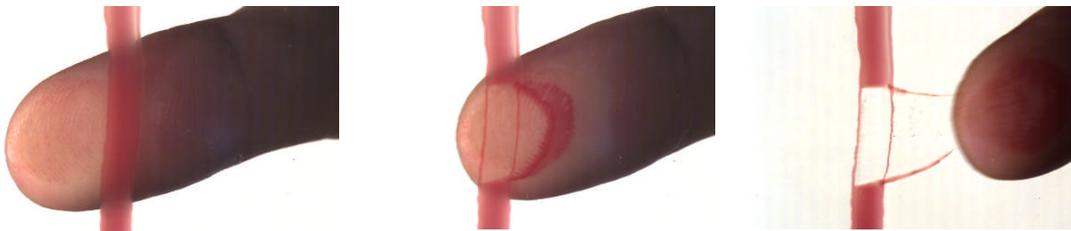
Impact Spatter - Hammer striking a pool of blood on a hard surface:



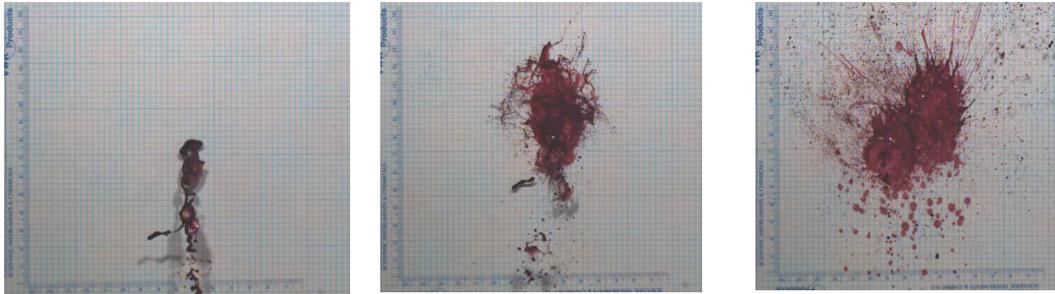
Cast-off - Bloodstained tube swung downwards, striking a wooden ledge:



Contact - Finger wiped through a partially dried blood flow:



Large Volume Projected Blood - Blood expelled from a syringe onto a horizontal target:



Expired - Gentle breath expelling blood from the mouth:



Firearms - .22 caliber bullet fired through a blood-soaked sponge:



Dissemination

A wide selection of video clips from this project is available via a Midwest Forensics Resource Center web page. To download a video clip, use an Internet browser to navigate to http://www.mfrc.ameslab.gov/Research_projects.php and click on Video Analysis of Bloodstain Pattern Formation project. The file name of the clip gives the information about the experiment shown in that video.

To use any video clip from the set available, first download the video to a local computer. The clip may be viewed by using either a media player such as Windows Media Player or the Photron viewer PFV 3.09. The PFV viewer software will enable a much more comprehensive set of tools for playing and analyzing the video clips including frame by frame control. The viewer can also be downloaded from the MFRC site. Instructions for using the PFV viewer are in the 'Read Me' file.

These clips are primarily designed to be of assistance to instructors of blood pattern courses. However, it is anticipated that researchers and caseworkers will also find them useful. They may be used for any presentation or project with the appropriate acknowledgement of their source.

Conclusion

This project offers two significant contributions to the practice of forensic science in the discipline of bloodstain pattern analysis.

Firstly, it has introduced, in a systematic way, the application of digital video technology to the study of bloodstain pattern formation. It is anticipated that this technology will take the science of BPA to a new level, by giving significant insight into the dynamics of the blood transfer event.

Secondly, it is reasonable to assume that the courts will continue to demand the highest standards of forensic evidence and scrutinise with even more thoroughness each and every method behind the opinion of an expert witness. BPA is a discipline that has relied heavily on the experience of the witness. It is anticipated that a closer scrutiny of the methods used in BPA will highlight the relative lack of underpinning scientific research and validation studies.

It is critical therefore, that the BPA community moves quickly to strengthen the discipline with sound basic research to underpin the testimony of the analyst and give the courts the confidence they need in this testimony. It is hoped that the results of this project will make a significant contribution to this.

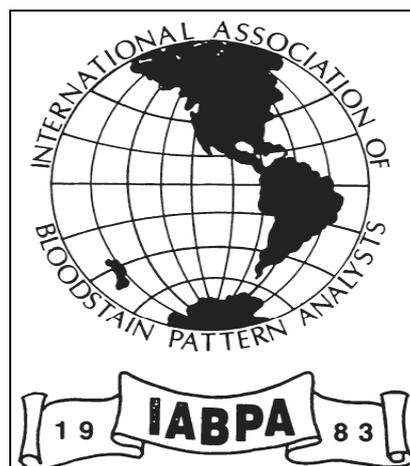
Acknowledgements

This project was primarily supported by an NIJ grant from the Midwest Forensics Resource Center as well as CRI Capability Funds from the Institute of Environmental Science and Research, New Zealand, Ltd.

The authors would like to acknowledge the willing support offered by Dr. David Baldwin and Mr. Dan Zanzow, Ames University, Iowa.

References

- [1] Emes A, Price C, Blood In Slow Motion, MPFSL Video, 1994.
- [2] Raymond MA, Smith ER, Liesegang J. Oscillating Blood Droplets – Implications for Crime Scene Reconstruction. *Science & Justice* 1996; 36:161-171.
- [3] Rahn D. High Speed Photography on Bloodstains. RCMP, Edmonton, Alberta, Canada, 20 minute video, 1993.
- [4] Chisum J. Slow Motion Blood Drop Studies. California Criminalistic Institute, California Department of Justice, 15 minute video, 1991.
- [5] Pizzola PA, Roth MS, De Forest PR. Blood Droplet Dynamics – 1, *Journal of Forensic Sciences*, 1986; 31(1): 36 – 49.
- [6] Taylor M, Wells J, Ross E. Design and Construction of a Bloodstain Pattern Analysis Laboratory. *IABPA News* 2007, 23(3): 15 -21.
- [7] Laber TL, Epstein BP. Experiments and Practical Exercises in Bloodstain Pattern Analysis. Callan Publishing, Inc, 1983.



NOTICE OF THE OPENING OF THE PUBLIC COMMENT PERIOD FOR THE SWGSTAIN DRAFT DOCUMENT ENTITLED "SCIENTIFIC WORKING GROUP ON BLOODSTAIN PATTERN ANALYSIS: RECOMMENDED TERMINOLOGY"

The Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN) would like to advise the bloodstain pattern analysis (BPA) community that it has posted its draft document entitled "Recommended Terminology" on its website (SWGSTAIN.org) for public comment. As captured within its business rules, SWGSTAIN is acutely aware of the importance of including the BPA community in its ultimate goal of formulating consensus-based, best practice guidelines for the enhancement of the discipline of BPA. Without mechanisms to include as many BPA professionals as possible in the development of a work product, SWGSTAIN recognizes that any guidance document it provides may not incorporate the strengths, nor address the weaknesses, inherent to a professional community with such a broad spectrum of practitioners. To this end, SWGSTAIN has made it a priority to infuse new ideas and perspectives into its deliberative process through 1) the invitation of guests to its regular meetings, 2) the establishment of *ex officio* relationships with professional organizations such as the International Association of Bloodstain Pattern Analysts (IABPA), the International Association for Identification (IAI), and the Association of Crime Scene Reconstructionists (ASCR), and 3) the presentation of SWGSTAIN updates at meetings of the BPA community.

While these strategies have proven invaluable to the SWGSTAIN process, it is through the public peer review process that SWGSTAIN has collected its most substantive input for incorporation into its published guidance documents. In an effort to make this critically important process as open to, and efficient for, the BPA community as possible, SWGSTAIN approached the IABPA concerning the potential of publishing materials in the IABPA News. As a result of these discussions, the IABPA has graciously allowed SWGSTAIN to print this notice as well as its most recently developed draft terminology document in this issue of the IABPA News. The SWGSTAIN membership would like to thank the IABPA for this professional courtesy and would like to encourage the IABPA membership to visit SWGSTAIN.org and submit comments regarding this proposed terminology. It is important to note that the SWGSTAIN Bylaws require that all written comments received by SWGSTAIN be formally addressed and that the responses to all comments be published for public review on SWGSTAIN.org. We hope that our commitment to formally address the comments of the BPA community through this public peer review process serves to tangibly demonstrate SWGSTAIN's continued belief that no group is better positioned and/or informed to establish best practice guidelines for BPA than the BPA community itself. It is only through such "cross-pollination" that a SWGSTAIN draft document can eventually serve as a viable guidance document that captures meaningful benchmarks against which the work of individuals and/or agencies performing BPA can be compared. It is the hope of SWGSTAIN that the BPA community, by taking the initiative and holding itself to such self-imposed benchmarks (whether they be assembled by SWGSTAIN or any other substantive BPA related body), can categorically demonstrate its commitment to establishing the reliability of BPA as a discipline, ensuring the expertise of its individual practitioners, and to constantly improving the quality of BPA work being conducted.

Scientific Working Group on Bloodstain Pattern Analysis: Recommended Terminology

Objective

This document provides a recommended list of terms to utilize when teaching, discussing, writing, or testifying on bloodstain pattern analysis.

Introduction

The Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN) comprises bloodstain pattern analysis (BPA) experts from North America, Europe, New Zealand, and Australia. SWGSTAIN serves as a professional forum in which practitioners in BPA and related fields can discuss and evaluate methods, techniques, protocols, quality assurance, education, and research. SWGSTAIN's ultimate goal is to use these professional exchanges to address substantive and operational issues within the field of BPA and to build consensus-based, or "best practice" guidelines for the enhancement of the discipline of BPA.

Statement of Purpose

SWGSTAIN has developed and defined a list of recommended terminology for use in BPA.

Recommended Terminology

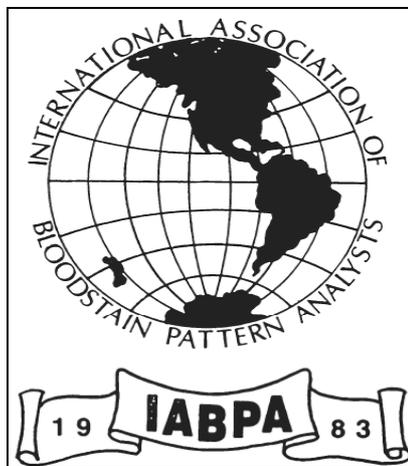
In developing this list, SWGSTAIN reviewed terminology in use across BPA.

Accompanying Drop	A small blood drop produced as a by-product of drop formation.
Altered Bloodstain	A bloodstain or pattern with characteristics that indicate a physical change has occurred.
Angle of Impact	The acute angle at which a blood drop strikes a target, relative to the plane of the target.
Area of Convergence	The area of intersection in two-dimensions created by lines drawn through the long axis of individual stains, most often associated with an impact pattern.
Area of Origin	The area in three-dimensions of a blood source most often associated with an impact pattern.

Back Spatter Pattern	A bloodstain pattern resulting from blood drops that travel in the opposite direction of the external force applied. Back spatter is often associated with a gunshot wound of entrance.
Blood Clot	A gelatinous mass formed as a complex mechanism involving red cells, fibrinogen, platelets and other clotting factors.
Bloodstain	A spot or stain made by blood.
Bloodstain Pattern	A characteristic grouping or distribution of bloodstains which may indicate the manner in which the pattern was deposited.
Bubble Ring	A ring in a bloodstain that results from an air bubble.
Cast-Off Pattern	A bloodstain pattern resulting from blood drops released from a bloodied object in motion.
Cessation Cast-Off Pattern	A bloodstain pattern resulting from blood drops released from a bloody object as it suddenly stops.
Directionality	The path of travel of a blood drop indicated by the stain's shape.
Directional Angle	The angle between the long axis of a bloodstain and a reference line on the target.
Drip Pattern	A bloodstain pattern resulting from liquid dripping into liquid, where at least one liquid is blood.
Drip Stain	A bloodstain resulting from the formation and falling of a drop of blood.
Drip Trail	A series of bloodstains that result from blood dripping from a source that is in horizontal motion.
Edge Characteristic	The physical characteristics at the periphery of a bloodstain that may be described as spines, scalloping, smooth or irregular margins.
Expired Pattern	A bloodstain pattern resulting from blood being forced out of the nose, mouth, or a wound by air pressure.

Flow Pattern	A bloodstain pattern resulting from the movement of a volume of blood on a surface due to gravity and/or movement of the target.
Forward Spatter Pattern	A bloodstain pattern resulting from blood drops that travel in the same direction as the external force applied. Forward spatter is often associated with a gunshot wound of exit.
Impact Pattern	A bloodstain pattern resulting from an object striking liquid blood.
Insect Stain	Bloodstains produced as the result of insect activity.
Mist Pattern	A bloodstain pattern resulting from blood reduced to a spray of localized micro drops as a result of the force applied, often associated with gunshot injuries.
Parent Stain	The bloodstain from which wave cast-off or satellite bloodstains originate.
Pool	An accumulation of liquid blood on a surface.
Projected Pattern	A bloodstain pattern resulting from the ejection of a volume of blood under pressure, often associated with a vascular breach.
Satellite Stain	Smaller bloodstains that originate during the formation of the parent stain as a result of blood impacting a surface.
Saturation Pattern	A bloodstain resulting from the accumulation of liquid blood in an absorbent material.
Serum Stain	The stain resulting from the liquid portion of blood that separates after coagulation.
Skeletonized Stain	A bloodstain which has been altered after a period of drying, leaving observable peripheral characteristics of the original stain.
Spatter Stains	Bloodstains resulting from blood drops distributed through the air due to an external force applied to a source of liquid blood.
Splash Pattern	A bloodstain pattern resulting from a volume of liquid blood that falls or spills onto a surface.

Swipe Pattern	A bloodstain pattern resulting from the transfer of blood from a bloodied surface onto another surface, with characteristics that indicate relative motion between the two surfaces.
Target	A surface onto which blood has been deposited.
Transfer Pattern	A bloodstain pattern resulting from contact between a wet bloody surface and another surface.
Void	The absence of blood in an otherwise continuous bloodstain pattern.
Wave Cast-Off Stain	A satellite bloodstain that originates from a parent bloodstain due to the wave-like action of the liquid that occurs when the parent drop strikes a surface at an angle.
Wipe Pattern	A bloodstain pattern resulting from an object moving through a pre-existing bloodstain, altering the original stain.



Proposed Changes to IABPA Bylaws

The following are proposed bylaw changes to be put to vote by the membership at the annual meeting to be held in Boulder, Colorado, October 7-10, 2008. As per the bylaws, all proposed amendments must be mailed to the voting members at least 60 days in advance of said meeting. The proposed changes are:

Chapter III – MEETINGS

Section 1 – Annual Meetings

Paragraph 4 – currently reads:

“The conference host shall NOT agree to or sign anything on behalf of the IABPA. Should he/she do so, he/she will be personally liable for all costs and ramifications thereof. The conference host shall present all bids, proposals and/or contracts to the Legal Advisor for review and presentation to the Executive Board for approval. All bids, proposals and/or contracts approved may be signed by the Legal Advisor, or approval given to the conference coordinator to sign, with approval as to financial obligations by the Secretary/Treasurer.”

Change to:

The conference host shall NOT agree to or sign anything on behalf of the IABPA. Should he/she do so, he/she will be personally liable for all costs and ramifications thereof. The conference host shall present all bids, proposals and/or contracts to the *Treasurer or his/her designee* for review and ~~presentation to the Executive Board for approval~~. All *approved* bids, proposals and/or contracts ~~approved~~ *shall* be signed by the *Treasurer or his/her designee*, ~~or approval given to the conference coordinator to sign, with approval as to financial obligations by the Secretary/Treasurer.~~”

CHAPTER IV – OFFICERS AND THE BOARD

Section 1- Officers

Paragraph 1 – currently reads:

The officers of the Association shall consist of a President, Immediate Past President, six (6) Regional Vice-Presidents, Secretary, Treasurer, Legal Representative, Historian and Sergeant-At-Arms. Only Full and Distinguished members may be officers of the Association. These officers shall be nominated at the annual meeting either as a recommendation by the Executive Board to the voting membership and/or a motion from any voting member in attendance at the Annual Business Meeting of the Association. Election of the Executive Board shall be by ballots mailed to all voting members in good standing. Ballots must be returned to the Secretary of the Association by mail and postmarked no later than December 31, of that year to be valid. The individual shall hold their respective office for one year and until that officer's successor has been elected. The term of office for each officer shall begin

on January 1st following that officer's election. The offices of the Secretary and Treasurer may be held by one elected officer situated in a permanent location and be held by the same person for more than one year to allow continuity of Association records and finances.

Change to (to remove the Legal Representative from the Board):

The officers of the Association shall consist of a President, Immediate Past President, six (6) Regional Vice-Presidents, Secretary, Treasurer, ~~Legal Representative~~, Historian and Sergeant-At-Arms. Only Full and Distinguished members may be officers of the Association. These officers shall be nominated at the annual meeting either as a recommendation by the Executive Board to the voting membership and/or a motion from any voting member in attendance at the Annual Business Meeting of the Association. Election of the Executive Board shall be by ballots mailed to all voting members in good standing. Ballots must be returned to the Secretary of the Association by mail and postmarked no later than December 31, of that year to be valid. The individual shall hold their respective office for one year and until that officer's successor has been elected. The term of office for each officer shall begin on January 1st following that officer's election. The offices of the Secretary and Treasurer may be held by one elected officer situated in a permanent location and be held by the same person for more than one year to allow continuity of Association records and finances.

Section 2 – Executive Board

B. Currently reads:

Vote - Any order or action of the Executive Board requires a majority vote of the Executive Board members present, unless otherwise provided for in these by-laws. Each officer of the Executive Board shall have one vote, with exception of the Legal Representative. The Legal Representative shall not be entitled to vote on Board related matters. In the event, the offices of Secretary and Treasurer are held by one person, he/she shall have only one vote on the Executive Board. The President shall abstain from voting on matters before the Executive Board except in the event of a tie vote. He/She then will cast the tie-breaking vote.

Change to:

Vote - Any order or action of the Executive Board requires a majority vote of the Executive Board members present, unless otherwise provided for in these by-laws. Each officer of the Executive Board shall have one vote. ~~with exception of the Legal Representative. The Legal Representative shall not be entitled to vote on Board related matters.~~ In the event, the offices of Secretary and Treasurer are held by one person, he/she shall have only one vote on the Executive Board. The President shall abstain from voting on matters before the Executive Board except in the event of a tie vote. He/she then will cast the tie-breaking vote.

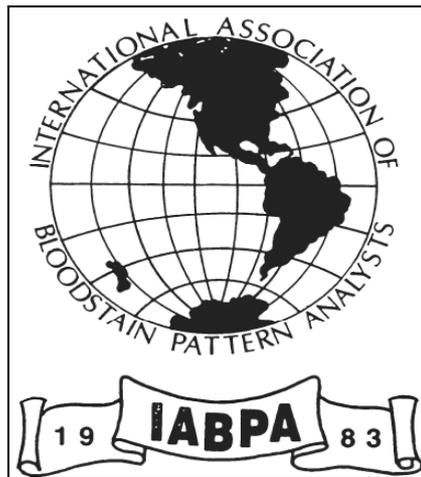
Section 8 – Duties of the Legal Representative

Currently reads:

The legal Representative will supply legal representation for the counsel to the Association in all legal matters concerning IABPA. Although the Legal Representative is to be considered a member of the Executive Board he/she is not entitled to vote on Board matters / issues.

Change to:

This section would be completely deleted to reflect change to legal representative no longer being a board member.



2008 International Association of Bloodstain Pattern Analysts Annual Training Conference

October 7-10, 2008

Hotel Boulderado in Boulder, Colorado, USA

Lodging information:

Conference attendees are responsible for making their own reservations with the hotel. The Hotel Boulderado is an historic hotel in downtown Boulder and within walking distance of numerous restaurants and stores.

Hotel Boulderado
2115 13th Street
Boulder, Colorado 80302
USA

Toll free: 866-826-2887
Fax: 303-443-7035
reservations@boulderado.com

Website: www.boulderado.com

When reserving your room(s), please reference “**IABPA/Bid # 1634**”. Room rates start at \$119 plus tax for traditional 1 queen and \$139 plus tax for deluxe 2 queen for single or double occupancy. There is a \$15 charge for each additional guest. IABPA rooms are blocked for us until 9 September 2008.

Transportation information:

The hotel is approximately 45-50 minutes from Denver International Airport (DIA). Parking at the hotel is through a valet service only at \$8 for a full day (four or more hours or overnight).

“SuperShuttle” provides a shuttle from DIA to the hotel at a cost of approximately \$22 for a one-way trip. After arriving from the concourses, go to the Boulder SuperShuttle counter in the west terminal. The shuttle departs DIA between 5:10 a.m. to 12:10 a.m. Reservations can be made at www.BoulderSuperShuttle.com or 303-227-0000.

Conference content:

Anyone interested in presenting at the general session and/or conducting a workshop and/or anyone with suggestions for topics in those areas please contact either Sheri Shimamoto at sheshi@lakewoodco.org or David DeHann at davdeh@lakewoodco.org. For general information about the conference, please contact one of the following conference coordinators: Tom Griffin at tom.griffin@cdps.state.co.us, Rich Tewes at RTewes@fcgov.com or Sgt. Tom Trujillo at TRUJILLOT@bouldercolorado.gov.

2008 Training Conference Registration Form
(Please print)

The conference will be a blend of workshops and general sessions with case and research presentations. The conference schedule and information on workshops will be published and posted when available. At that time pre-registration for workshops will be accepted.

Last name _____ First name _____

IABPA member Yes _____ Member # _____ No _____

Name as you would like it to appear on the attendance certificate _____

Agency _____

Address _____

City _____ State/province _____ Postal code _____

Country _____ Telephone _____

E-mail _____

Name(s) of guest attending the conference with registrant _____

Are you interested in any formalized activities for your guest? _____

Will guest(s) be attending the Thursday dinner? Yes _____ No _____ Cost is \$50 US per guest.

Registration (including Thursday dinner, all costs are US dollars):

Paid before 9 September \$250 and student cost \$200.

Paid between 9 September and 6 October \$280 and student cost \$220.

On site \$300 and student cost \$240. On-site registration will begin at 6:00 p.m. Monday, 6 October.

Make checks and purchase orders payable to IABPA. Federal ID# IABPA 52-1597063.

Refund requests must be made before 1 September 2008.

Mail registration and payment to:

Colleen Wilcox (IABPA)

Boulder Police Department

1805 33rd Street

Boulder, Colorado, 80301, USA

Phone: 303-441-4483

Fax: 303-441-3459

e-mail; WilcoxC@bouldercolorado.gov

For credit card payments contact:

Norman Reeves

Phone: 520-760-6620

Fax: 520-760-5590

e-mail: Norman@bloody1.com

2008 IABPA Conference Questionnaire

This questionnaire is intended to help the conference committee organize workshops for this year's conference. Please respond by 4 July by sending your replies to either Sheri Shimamoto at sheshi@lakewoodco.org or David DeHaan at davdeh@lakewoodco.org.

Mail to:

Lakewood Police Crime Lab
445 South Allison Pkwy
Lakewood, Colorado 80226

Rank the following proposed workshop topics in order of interest to you. Use "1" to denote the topic of the most interest, "2" for the next topic, etc.

- | | |
|--|--|
| <input type="checkbox"/> High speed video | <input type="checkbox"/> BPA documentation on clothing |
| <input type="checkbox"/> Complex patterns | <input type="checkbox"/> Mixed and sequenced stains |
| <input type="checkbox"/> Poser applications | <input type="checkbox"/> Hands-on photography of bloodstains |
| <input type="checkbox"/> 3-D laser reconstruction | <input type="checkbox"/> BPA examination of firearms |
| <input type="checkbox"/> IR photography | <input type="checkbox"/> 3-D laser reconstruction |
| <input type="checkbox"/> Defending an "indefensible" position | |
| <input type="checkbox"/> Strings vs. software for area of convergence/origin | |
| <input type="checkbox"/> Participation in "What if" bloodstains and "I saw this stain" | |
| <input type="checkbox"/> Applying a Methodology for BPA | |

If there are other topics you would like to see, please list those and indicate your level of interest starting with "1" for most interest, etc.

_____	_____
_____	_____
_____	_____

Would you be interested in an evening session in which you could bring your own bloodstain cases to share?

Thank you for taking the time to share your thoughts.

The 2008 conference committee.

2008 IABPA Training Conference Preliminary Schedule

As general session presentations are submitted and accepted, they will be inserted into the schedule. Anyone interested in presenting at the general sessions is encouraged to submit your proposal as soon as possible.

Monday, October 6th, Evening: On-site registration

Tuesday, October 7th, Morning: Welcome
Start of general session
Afternoon: Workshops (see topics below)

Wednesday, October 8th, Morning: Workshops continued
Afternoon: Resume general session

Thursday, October 9th, Morning: General session
IABPA business meeting
Afternoon: General session
Evening: Dinner

Friday, October 10th, Morning: General session
Close of conference

Pending workshop topics:

- Complex patterns
- Applying a methodology for BPA
- BPA photography
- Mixed and sequenced bloodstains
- High speed video experiments
- BPA documentation on clothing
- Strings versus software for area of convergence
- Courtroom testimony
- Defending an “indefensible” position

ABSTRACTS OF RECENT BPA RELATED ARTICLES PUBLISHED IN THE SCIENTIFIC LITERATURE

Langenburg, Glenn, Deposition of Bloody Friction Ridge Impressions; *Journal of Forensic Identification*, 58 (3), 2008.

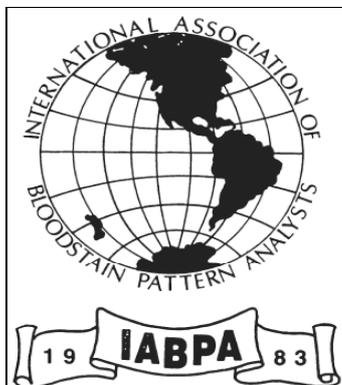
Abstract:

To date, no experiments have been published measuring the cause and effect relationship of various deposition factors and the resultant appearance of the ridge detail in a bloody friction ridge impression. This study reports the effects of deposition pressure (at four categories of pressure: light, medium, heavy and extreme), the effects of increasing volumes of human blood loaded onto a finger (from 10 μ L to 100 μ L), the effects of depositing impressions on a horizontal surface versus a vertical surface, and finally, the effects of allowing the blood to dry on the finger for a significant amount of time before depositing the impression (hereafter: predeposition waiting interval or PWI). Prior to testing these variables, a series of study design tests were also performed to optimize the conditions of the study. During these tests, we examined several other factors (such as the temperature of the blood, the ambient air temperature, the temperature of the skin) for their contribution to the appearance of the bloody impressions.

The trials showed that to produce identifiable impressions, relatively small amounts of blood were needed (10 to 20 μ L). When impressions were deposited in a vertical position, increasing the deposition pressure were produced with larger amounts of blood when there was a significant PWI interval. After allowing some of the excess blood to dry on the finger, an identifiable impression was deposited.

NEW BOOK PUBLICATION

Bevel, Tom and Gardner, Ross M., *Bloodstain Pattern Analysis with an Introduction to Crime Scene Reconstruction - Third Edition*. CRC Press, Taylor & Francis Group, Boca Raton, Florida, April 2008.



Bloodstain Pattern Analysis in the News

Alexei Pace

Presented below are news articles that feature bloodstain pattern analysis. Links are active at the time of writing (mid-May 2008), however they may be put offline after a few weeks. These news items are distributed through the '**Bloodstain-Patterns**' mailing list and discussion forum, which so far counts 308 members and to which one may subscribe by visiting: <http://tech.groups.yahoo.com/group/bloodstain-patterns>. All case details published are as found in the public domain and were acquired through online news websites. The author is not responsible for any misinterpretations by the press however any clarifications, if required, shall be published in the next edition. URL's are being presented in the tinyurl.com format.

Expert: Suspect in Ranger death was near gun ArmyTimes.com - Springfield,VA,USA

<http://tinyurl.com/6fczps>

William T. Vosburgh, forensic lab director for District of Columbia police, said he identified the outline of a shoe and a handprint in the blood on the carpet. Vosburgh's testimony is crucial to the prosecution's case because the state must prove that Smith was close enough to McQueen to have pressed the gun against McQueen's temple before firing. Vosburgh also noted that Smith had large amounts of blood on his left hand and on his right pants leg and shoe when he was questioned by police, according to photographs presented in court. "At some point, the shoe and the pant leg had to be under that bleeding source," he said.

KBI expert: Suspect is linked to crime scene Salina Journal - Salina,KS,USA

<http://tinyurl.com/62zgxu>

Blood spatter expert Holly Wasinger, of the Kansas Bureau of Investigation, testified that she spent several hours examining Jamison's trailer the day his body was found and taking photographs. She later reviewed her photos and photos taken by other law enforcement officers; examined bloodstained clothing worn by McMillan that day; reviewed law enforcement reports; and reviewed a written statement given to law enforcement by McMillan.

Based on that information, Wasinger said, she concluded that McMillan was present while Jamison was alive and bleeding. She said she found bloodstains on McMillan's jeans and on his shirt that were consistent with "expired blood." Expired blood is blood pushed, by the force of air, from someone's nose, mouth or a wound. Wasinger said the person would have to be breathing to expire blood. Wasinger also testified the amount of blood on McMillan's clothing indicated "more than casual contact with the victim."

Bloodstains point to son-in-law as killer, says scientist

<http://tinyurl.com/5a5hap>

Forensic evidence pointed to David Hill being his mother-in-law and business partner's killer, a jury heard. Forensic scientist Samantha Warna told Leeds Crown Court there was evidence of blood spattering on Hill's training shoes, jeans and denim jacket. She said: "Because of the distribution and condition of the blood, in my opinion the findings were in keeping with David Hill having repeatedly struck Molly Wright." Prosecutor Nicholas Campbell asked her where she believed Hill would have been when Mrs. Wright was attacked on the afternoon of September 27, 2006. She replied: "He would have to be very close by. No more than a metre away on the basis of the size of blood spots seen on his clothing."

Organizational Notices

Moving Soon?

All changes of mailing address need to be supplied to our Secretary Norman Reeves. Each quarter Norman forwards completed address labels for those who are members. Do not send change of address information to the NEWS Editor. E-mail your new address to Norman Reeves at:

norman@bloody1.com
Norman Reeves
I.A.B.P.A.
12139 E. Makohoh Trail
Tucson, Arizona 85749-8179
Fax: 520-760-5590

Membership Applications / Request for Promotion

Applications for membership as well as for promotion are available on the IABPA website:
IABPA Website: <http://www.iabpa.org>

The fees for application of membership and yearly dues are \$40.00 US each. If you have not received a dues invoice for 2008 please contact Norman Reeves. Apparently, non US credit cards are charging a fee above and beyond the 40.00 membership/application fee. Your credit card is charged only \$40.00 US by the IABPA. Any additional fees are imposed by the credit card companies.

IABPA now accepts the following credit cards:

**Discover Mastercard
American Express Visa**

Training Opportunities

July 28-August 1, 2008

**Basic Bloodstain Pattern Analysis Course
Mineral Wells, Texas**

Instructors: Rex Plant and Johnny Aycock

Contact: Rex Plant

Tel: 410-286-5520

E-mail: www.forensictraining.us

August 11-15, 2008

**Basic Blood Pattern Analysis Course
London, England
Hosted by the Metropolitan Police Service,
London, England
at The City and Angel College, London**

Instructors:

Paul Kish (USA) and Stuart James (USA)

For course registration and further information,
please contact:

Tony Larkin, Metropolitan Police Service

anthony.larkin@met.police.uk

Phone: 00 44 (0) 207 230 0342

Fax: 00 44 (0) 207 230 0308

September 8-12, 2008

**Advanced Bloodstain Analysis Course
Ontario Police College
Alymer, Ontario, Canada**

Course coordinator: Rick Devine

E-mail: richard.devine@ontario.ca

Further information: <http://www.opconline.ca>

September 22-26, 2008

**Bloodstain Evidence Institute
Corning, New York**

Contact: Professor Herbert Leon MacDonell Director

P.O. Box 1111

Corning, New York 14830

Tel: 607-962-6581

Fax: 607-936-6936

E-mail: forensiclab@stny.rr.com

October 6-10, 2008

**40-Hour Basic Bloodstain Pattern Analysis
Training Course
Tacoma Police Department
Tacoma, Washington**

Contact: Daniel V. Christman, BS

PO Box 823

Bothell, Washington 98011

Tel: 206-919-8392

E-mail: dan@christmanforensics.com

November 17-21, 2008

**Basic Bloodstain Pattern Analysis Course
Mineral Wells, Texas**

Instructors: Rex Plant and Johnny Aycock

Contact: Rex Plant

Tel: 410-286-5520

E-mail: www.forensictraining.us

December 1-5, 2008

**Basic Bloodstain Pattern Analysis Workshop
Miami, Florida**

Presented by the Specialized Training Unit of the

Miami-Dade Police Department

Doral, Florida

Contact: Toby L. Wolson, M.S., S-ABC

Miami-Dade Police Department

Crime Laboratory Bureau

9105 NW 25th Street

Doral, Florida 33172

Voice: 305-471-3041

Fax: 305-471-3041

E-mail: Twolson@mdpd.com

December 8-12, 2008

**Level 3 Bloodstain Class
Mineral Wells, Texas**

Instructors: Rex Plant and Johnny Aycock
Contact: Rex Plant
Tel: 410-286-5520
E-mail: www.forensictraining.us

*Training Announcements for the September
issue of the 2008 IABPA News must be
received before August 15, 2008*

Editor's Corner

This issue of the IABPA NEWS is enhanced by the publication of the article, High Speed Digital Video Analysis of Bloodstain Pattern Formation from Common Bloodletting Mechanisms by Terry L. Laber, Bart P. Epstein, and Michael C. Taylor. The reproduction of the images in color certainly enhances their quality and demonstrates their fine work. As stated in their article, the video clips are available for your use and may be downloaded from the website, http://www.mfrc.ameslab.gov/Research_projects.php. I have found that the individual video clips are easily inserted into power point presentations.

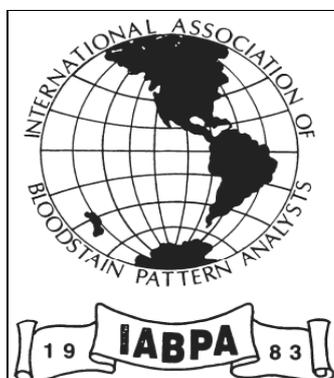
Please take the time to review the Scientific Working Group on Bloodstain Pattern Analysis Recommended Terminology that is presented in this issue. I strongly encourage the IABPA membership to visit SWGSTAIN.org and submit comments regarding this proposed terminology.

Our President, LeeAnn Singley has also provided this issue with proposed Bylaw changes to be put to vote by the membership at the annual meeting to be held in Boulder, Colorado, October 7-10, 2008. There is ample time to review these proposed changes prior to voting at our business meeting.

The July 2008 International Association of Bloodstain Pattern Analysts 2nd Annual Training Conference to be held in Zurich, Switzerland will be covered extensively in the September issue of the NEWS. I will provide abstracts of the presentations and photographs of the speakers and conference activities.

The 2008 International Association of Bloodstain Pattern Analysts Annual Training Conference to be held in Boulder, Colorado, October 7-10, 2008 still has openings for speakers. If you have an interesting case or research project to report, please contact the conference committee. Their contact information is on page 21 of this issue. Presentations are also welcome to be submitted to the Editor of the NEWS to be peer reviewed for future publication in the NEWS.

Stuart H. James
Editor, IABPA NEWS
E-mail: jamesforen@aol.com



Past Presidents of the IABPA

V. Thomas Bevel	1983-1984
Charles Edel	1985-1987
Warren R. Darby	1988
Rod D. Englert	1989-1990
Edward Podworny	1991-1992
Tom J. Griffin	1993-1994
Toby L. Wolson, M.S.	1995-1996
Daniel V. Christman	1997-1998
Phyllis T. Rollan	1999-2000
Daniel Rahn	2001-2002
Bill Basso	2002-2006

Associate Editors of the IABPA News

L. Allyn DiMeo
Barton P. Epstein
Paul E. Kish
Jon J. Nordby
Alexei Pace
Joseph Slemko
Robert P. Spalding
T. Paulette Sutton
Todd A. Thorne

The IABPA News is published quarterly in March, June, September, and December. © 2008. The International Association of Bloodstain Pattern Analysts. All rights are reserved. Reproduction in whole or in part without written permission is prohibited.