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Hello everyone,

I am hoping many of you are reading this President’s Message while preparing for your trip to San Antonio for this year’s conference. By now it is only a few weeks away and I know I am looking forward to my travel there. Our four day event is shaping up nicely and I would like to take this opportunity to recognize our Conference Committee Chair, J.D. Robertson and our Central Region Vice-President Iris Dalley for all their work and commitment to making this year’s conference a success. As you may know, some fantastic workshops are being offered this year as well as our normal general sessions. I am anticipating a great attendance.

In addition, your Executive Board has also been hard at work this year addressing issues which impact the organization. Some of these issues will be discussed at the upcoming business meeting and your attendance at that meeting is imperative. Anyone having additional agenda items or issues of concern can still have them placed on the meeting’s agenda. I will be finalizing the business meeting agenda at the commencement of the conference. Since time is limited and many may have travel arrangements already made, only those items on the agenda will be taken up at the meeting. Don’t miss out on this opportunity to have something important to you addressed.

This will be my first conference serving as your President. I look forward to seeing old friends and making new ones…..and I look forward to sharing in an exchange of information for the betterment of our discipline.

See you in Texas!!!

Take care,

LeeAnn Singley
President, IABPA
THE TANGENT METHOD AND SPREADSHEETS
Determining Point or Area of Origin in Bloodstain Pattern Analysis

Fons Chafe

Abstract

A method employing “Microsoft Office Excel 2003” worksheet is described to easily calculate the values of width to length ratios, impact angles, and distance from a target surface. Instructions are provided to set up the worksheet to provide an alternative method to the scientific calculator when using the tangent method in determining the area of origin.

Introduction

The tangent method for determining area of origin in bloodstain pattern analysis is an extension of the standard protractor method used to string an impact site at crime scenes. The tangent method is most often employed when determining an impact location from photographs of bloodstains but it can be employed as an alternative to the protractor method for stringing at the crime scene.

Both the tangent and protractor methods involve initial determination of impact angles ($\alpha$ in the below diagram) using the arc sine of the width to length ratios of selected bloodstains on a target surface. The tangent method requires measuring the distance from the leading edge of each individual bloodstain to the point of convergence ($b$ in figure 1). The distance from the target surface ($a$ in figure 1) where the impact occurred may be determined by multiplying the distance from the leading edge of each individual bloodstain to the point of convergence ($b$ in figure 1) by the tangent of the impact angle ($\alpha$ in figure 1) associated with that particular bloodstain. This process is repeated for each of the particular bloodstains selected for the “stringing” process thus providing an area commonly referred to as the area of origin or impact site.

The tangent method uses a string from the leading edge of a bloodstain and is attached to an axis at a determined distance from the target surface. It is assumed that the reader is familiar with this method which has been described in literature such as Griffin & Anderson (1993) or Bevel & Gardner (1997). A scientific calculator is often used to determine the values of the ratios, arc sine, and tangent function values. The proliferation of computers, including hand held PDA’s or palm size units, provides an alternative to the scientific calculator at the scene. This paper describes how a bloodstain pattern analyst can use a “Microsoft Office Excel 2003” spread sheet to easily calculate the required values by input of three measurements: the (1) width and (2) length of a bloodstain and (3) the distance from the leading edge to the area of convergence. The technique described works with earlier versions of “Excel.”
Formulas – Excel’s Recipe for Calculations

The common mathematical formulas employed in bloodstain pattern analysis are the width to length ratios obtained by dividing the measurement of the width of a particular bloodstain by the length of that bloodstain. The arc sine of this ratio is then obtained to determine the angle of impact (α). Once the angle of impact (α) has been obtained, the product of the tangent of this angle is multiplied by the distance between the bloodstain and the point of convergence (b) and results in the distance from a target surface (a). The bloodstain analyst can use Excel formulas that are programmed and modify the formula to obtain the required results for their analysis.
STEP 1: To begin, a row of headings can be placed in the first cells of the columns as follows.

<table>
<thead>
<tr>
<th>BLOODSTAIN</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>W/L RATIO</th>
<th>IMPACT ANGLE</th>
<th>b tan</th>
<th>b x tan = a</th>
</tr>
</thead>
</table>

The computer screen should look like figure 2 once you have entered the headings along the top row. You can increase the size of the cells to accommodate the longer words such as “BLOODSTAIN” by placing your cursor on the right side of the exterior row labeled “A” and a vertical line and horizontal arrow will appear. Once you have this display, right click on the mouse and drag the column to the desired width to accommodate the longer word.

![Figure 2. Microsoft Excel screen with headings across row 1.](image)

Next go to cell A2 and enter “#1” inside this cell. Then place your cursor on the bottom right corner of the A2 cell until the screen display turns from an arrow to a solid cross. Once the cursor changes to a cross, right click on the mouse and hold while you drag downwards to the desired number of bloodstains, in this case a dozen stains, to the A13 cell. Release the mouse and Excel will automatically fill the cells between A2 and A13 with the appropriate sequential numbers as shown in figure 3.
STEP 2: The next step is to set up the spreadsheet to calculate the width to length ratios after the analyst inputs the numerical values of these measurements. In the D2 cell of the spreadsheet enter the following “=B2/C2” as shown in figure 4. This instructs Excel to divide the width by the length input values and list this ratio in the D column.

![Microsoft Excel spreadsheet with sequential bloodstain numbers.](image)

![Microsoft Excel spreadsheet with “=B2/C2” entered in D2 cell.](image)
Then place your cursor on the bottom right corner of the D2 cell until the screen display turns from an arrow to a cross. Once the cursor changes to a cross, right click on the mouse and hold while you drag downwards to the desired number of bloodstains to enter, in this case of a dozen stains, to the D13 cell. Release the mouse and Excel will automatically fill the cells between D2 and D13 with the appropriate division formula to calculate the width to length ratio as shown in figure 5. The cells will fill with “#DIV/0!” which is just the Excel’s way of telling you not to divide by zero.

**STEP 3**: Next step is to enter the information to calculate the impact angle of the width to length ratio. In the E2 cell enter the following, “=ASIN(D2)*180/PI()”. This instructs Excel to calculate the arc sine of the width to length ratio and return the value in degrees under the E column. Once this has been entered again place the mouse in the bottom right corner of the E2 cell until it turns to a cross on the screen and click and drag down to the E13 cell. Again Excel will automatically fill the cells with the formula to calculate the arc sin of the width to length ratio in degrees. The cells again fill with “#DIV/0!” to remind you that division by zero is not permitted (Figures 6 and 7).
STEP 4: Next proceed to the G2 cell and enter “=TAN(E2*PI()/180)”. This calculates the tangent value of the associated impact angle (Figure 8).
Afterwards position the cursor on the lower right corner of the G2 cell until the screen displays a cross and click and drag to cell G13. The cells will automatically be set to calculate the tangent of the impact angle in degrees and the “#DIV/0!” reminder appears in all of the cells (Figure 9).
**STEP 5**: The last formula to enter is under the $b \times \tan = a$ heading which is the distance from the bloodstain to the point of convergence multiplied by the tangent of the impact angle. Go to the H2 cell and enter “=F2*G2”. (Figure 10)

![Image](image1.png)

*Figure 10. The H2 cell with “=F2*G2” entered.*

Again position the cursor on the lower right corner of the cell until the screen displays a cross and click and drag to cell H13. The cells will automatically be set to calculate the tangent of the impact angle in degrees and the “#DIV/0!” reminder appears in all of the cells. (Figure 11).

![Image](image2.png)

*Figure 11. Cells H2-H13 set to calculate the tangent of the impact angles of bloodstains 1-12.*
Once the template has been created the analyst will only have to input values under the columns labeled “Width”, “Length”, and “b”. For example if you have a width of 1 and a length of 2 this should result in a width to length ration of 0.5 and an impact angle of 30°. The tangent of 30° is 0.577350269 (to 9 significant digits). If you enter these two values under the width and length columns you should obtain the following display as shown in figure 12.

![Figure 12. Tangent of angle of impact of 30 degrees for bloodstain 1.](image)

If the distance from bloodstain #1 to the point or area of convergence was 40 then entering this value under the “b” column in cell F2 will automatically multiply this by the tangent value of “0.577350269” found in cell G2 and display the result of 23.0940108 in cell H2 as shown in figure 13.

![Figure 13. Display of distance to point or area of convergence for bloodstain 1.](image)
**STEP 6:** Finally you can average the total distances entered under the H column however you must enter values for the exact number of bloodstains for this to work properly. In this case you have a dozen bloodstains so you must completely enter values of width, length, and “b” for all 12 stains. If you only enter 10 stains Excel will still average for 12 total stains and assume values of zero for the two stains that you did not enter. To have Excel compute an average for all 12 bloodstain values go to cell H15 and enter “=AVERAGE(H2:H13)” and once you have entered values for all 12 stains this cell will display the average distance from the target surface of all 12 strings as shown in figure 14.

![Sample Excel Image](image_url)

*Figure 14. Insertion of “=AVERAGE(H2:H13)” for stains 1-12.*

Again once you enter this formula Excel will return “#DIV/0!” in the H15 cell to remind you about division by zero is not possible. In the adjacent cell G15 you may also enter “Average =” and align this on the right side of the column so that when all 12 values have been entered in the spreadsheet you will obtain the average distance from the target surface (Figure 15).

Once the template has been created the analyst will only have to input values under the columns labeled “Width”, “Length”, and “b”. Excel will then automatically compute the values that you might ordinarily use a scientific hand held calculator. The above example is set up for twelve bloodstains however it can be modified for any number of bloodstains by dragging the mouse to the desired numbered cell and making necessary modifications to the average calculation.

As the width to length ratio negates the measurement input you can enter either SI or imperial units (i.e. mm or inches) for these values. The input value of “b” will determine which system of measurement should be used in the final computed values.
Figure 15. “Average =” entered in the adjacent cell G15 and aligned on the right side of the column.

References

Griffin, Tom J. and Anderson, John W., Out on a Tangent with Bloodstain Pattern Interpretation IABPA News, 9 (1), 1993 p. 3-5

TECHNICAL ARTICLE

Design and Construction of a Bloodstain Pattern Analysis Laboratory

Michael Taylor¹, Joanna Wells² and Emma Ross³

Abstract

Because of the nature of the experimental work related to bloodstain pattern analysis, it is desirable to have a suitable space in which the work can be carried out. The design of a fully functional bloodstain pattern analysis laboratory is described, including details of several special features such as moveable walls and an adjustable ceiling. The laboratory has been built within an existing garage.

Introduction

Bloodstain Pattern Analysis (BPA) often requires experiments to be carried out under controlled conditions both for research and crime scene reconstruction purposes. This article is intended to be an example for those wishing to set up in a purpose-built BPA laboratory for teaching, casework reconstruction experimentation or research. The key requirements of this laboratory were:

(1) A facility that would enable blood to be safely spattered with an easy clean-up afterwards
(2) A flexible spatial arrangement of walls and ceiling to, where possible, enable a recreation of the dimensions of a room at a scene
(3) The ability to easily set up separate compartments for groups of students to do practical exercises during a bloodstain pattern analysis course
(4) The flexibility to transform the laboratory into a examination room for vehicles and other large objects (we did not have the luxury of a dedicated space)
(5) Access to basic laboratory facilities and equipment

Design

The laboratory was designed to fit into an already existing garage. To adapt it to a space that could be used for bloodstain pattern analysis purposes, a number of special features were added.

Moveable Walls

A key design feature of the laboratory has been the construction of adjustable wall sections. Seven moveable wall panels were designed so that the dimensions of the working space could be altered to suit required experimental conditions and simulate different crime scenes (Figure 1).

¹ Senior Forensic Scientist, Institute of Environmental Science and Research Limited (ESR), Christchurch, New Zealand
² Masters Student, University of Canterbury, Christchurch, New Zealand
³ Masters Student, University of Auckland, Auckland, New Zealand

I.A.B.P.A. News 15 September 2007
Figure 1. Plan view of seven wall panels set up to simulate a room of internal dimensions 1.8 m x 2.4 m.

The wall panels were built to fit within the existing laboratory dimensions to optimise their functionality. Each panel consisted of a 2400 x 600 mm pinex board (soft board) and a base with castor wheels (Figure 2). A sandbag was placed onto the base of the wall panel for stability. In order to align and join the walls horizontally, bolts were used in holes drilled in the framing timber.
Additional wall panels without wheeled bases were also constructed. These were used to create temporary dividers to partition the space into teaching bays for bloodstain pattern training courses. These panels were kept upright by aluminium supports top and bottom.

Adjustable ceiling

An adjustable ceiling was designed so that the height could be varied upwards from a minimum of 2 m (the existing garage was over 3 m in height). This was achieved using a lightweight aluminum T-grid ceiling system, which was suspended on chains from the main ceiling (Figures 3, 4, 5). Removable clips connect the T-grid frame to the chains. To construct a ceiling (or a portion thereof), pieces of 1520 x 900 x 7 mm Foamcore (light weight foam board) can be attached to the underside of the T-grid with VELCRO® to form a flat ceiling surface.
Figure 3. Top view of the T-grid system

Figure 4. Side view of the T-grid system showing clip positioning
Linings

Paper (80 GSM, white bleach craft, 1800 mm and 900 mm width), is used to line wall and ceiling surfaces. The larger width paper is cut from a wheeled roll dispenser (Figure 6). Paper is attached to the walls and/or the Foamcore ceiling with staples (Figures 5, 7). Once bloodstained, the paper is easily removed from the wall and ceiling surfaces and disposed of.

Figure 6. 1800 mm paper dispenser
**Additional features**

Other features of the laboratory include:

- Sink with a foot-activated tap, a soap-dispenser and paper towels for cleaning
- Moveable work table with lockable wheels
- Water bath with an agitation feature to heat and mix blood in preparation for experimentation
- Fridge to store blood
- The capacity to seal out light for luminol enhancement

**Functionality**

Prior to use, the dimensions of the laboratory space are set by altering the ceiling height and positioning the moveable walls. The walls, floor and ceiling of the laboratory are covered with white paper.

With the exception of adjusting the ceiling height, the set up of the BPA laboratory can be accomplished easily by one person. This includes the papering of the walls, floors and ceiling, positioning the moveable walls and attaching/removing the Foamcore board from the T-grid ceiling system. Adjustment of the ceiling height requires two people.

The laboratory can be quickly transformed into an examination room for large objects such as vehicles. The wall panels are simply wheeled to one side of the laboratory and work tables are packed away.

---

*Figure 7. Trainees conducting experiments in sectioned cubicles constructed with the aid of the moveable walls.*
Conclusion

The BPA laboratory described here has a relatively simple design and was inexpensive and quick to construct within an existing garage. It is an easily adaptable space and requires minimal upkeep.

The main use of the laboratory has been for research experiments but it has proved invaluable for teaching both basic and advanced BPA courses. In our observations, the lack of a suitable experimental space can be a barrier to conducting important BPA reconstruction experiments when these are required for a case. The laboratory has therefore also proved to be a great asset for our BPA caseworkers.

ABSTRACTS OF RECENT BPA RELATED ARTICLES PUBLISHED IN THE SCIENTIFIC LITERATURE


Abstract

A basic way to accomplish the documentation of bloodstain evidence is with the use of a photographic grid pattern. The grid pattern can be applied to floors, walls or ceilings. This method can be employed by the experienced analyst as well as by a novice crime scene investigator who has no knowledge of bloodstain pattern analysis.


Abstract

Luminol is a valuable tool for crime scene examiners. The use of this reagent, primarily at crime scenes, allows the visualisation of occult or diluted blood, and the detection of small quantities of blood. Various different luminol formulations have been proposed over the years. In this study we have compared four different formulations with respect to luminescence and longevity. DNA profiling of blood treated with the four formulations with AMPFISTR® SGM Plus™ and low copy number (LCN) DNA analysis allow us to make recommendations of the most appropriate luminol formulations to be used under particular case circumstances.
2007 INTERNATIONAL ASSOCIATION OF BLOODSTAIN PATTERN ANALYSTS
ANNUAL TRAINING CONFERENCE

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Norman Reeves
Telephone: 520-760-6620
Fax: 520-760-5590
E-mail: Norman@bloody1.com

On-site registration will begin at 6:00 PM on September 30th, 2007 at the Radisson Hill Country Resort

Flight number, date, time of arrival if known:_______________________________
CALL FOR PRESENTATIONS

If you have a paper to present during the 2007 Annual Meeting of IABPA please contact the Conference Chairman, Jeffery Robertson, and provide the information below. Either send a fax to him at: (210) 932-9495 or send it as an attachment to an e-mail to him at: jeffery.robertson@txdps.state.tx.us. You can also mail it to:

8806 Broadway San Antonio, Texas 78217

Research papers are of primary interest, however, case reports and miscellaneous material is still most welcome. There are only so many hours available so do not wait until it is too late to be put on the program before sending your information.

IABPA 2007 SPEAKER INFORMATION

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Address:___________________________________________________________

Title:______________________________________________________________

Please submit A) an abstract of your paper (suitable for inclusion in the conference notebook), B) the time you will require (up to 45 minutes), and C) a short biography, with a digital photograph (again, suitable for inclusion in the conference notebook) by August 31st, 2007. If there is more than one author, clearly identify which one will be the presenter.

What equipment will you require?

( ) PowerPoint Projector

( ) Laptop Computer

( ) 35 mm Slide Projector

( ) Empty 35 mm Carousel Magazine(s)

( ) Overhead Projector

( ) VHS Tape Player and Large TV Monitor

( ) Other: _______________________________________________________

It is expected that those who require a laser pointer will bring their own but we will also have a backup available.
Sunday, September 30, 2007

6:00 pm to 8:00 pm  Registration Hotel Lobby
6:00 pm to 9:00 pm  Hospitality Suite

Monday, October 1, 2007

7:00 am  Breakfast
8:00 am to 9:00 am  Registration
9:00 am to 9:45 am  Opening Ceremony
10:00 am to 10:45 am  Sam Shepard Case  Bart Epstein
11:00 am to 11:45 am  TBA  Dr. Silke Brodbeck
11:45 am to 1:00 pm  Lunch
1:00 pm to 1:45 pm  Reserved for Case Presentation Break-out
1:00 pm  Complex Bloodstain Patterns  Pat Laturnus
2:00 pm to 2:45 pm  Luby’s Massacre  John Aycock
3:00 pm to 3:45 pm  Taxonomy: its use for BPA  Philippe Esperanca
4:00 pm to 5:00 pm  High-Speed Video  Dr. Michael Taylor
   Break-out
6:00 pm  High-Speed Video  Dr. Michael Taylor
6:00 pm to 9:00 pm  Hospitality Suite
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<td>BPA of Clothing</td>
<td>Pete Smith</td>
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<td>Complex Bloodstain Patterns</td>
<td>Pat Laturnus</td>
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<td>Bob Henderson</td>
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<td>Peter Rovers</td>
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<tr>
<td>7:00 am</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>9:00 am to 9:45 am</td>
<td>Case Presentation</td>
<td>Kevin Maloney</td>
</tr>
<tr>
<td>10:00 am to 10:45 am</td>
<td>Digital UV/IR Photography</td>
<td>Rob Cheeseman</td>
</tr>
<tr>
<td>11:00 am to 11:45 am</td>
<td>Reserved for Case Presentation</td>
<td></td>
</tr>
<tr>
<td>12:00 pm</td>
<td>Conference concludes</td>
<td></td>
</tr>
</tbody>
</table>

The Conference schedule is subject to change and finalization.
The Second European IABPA Region V
Training Conference 2008
Zurich, Switzerland

Wednesday 2 July – Friday 4 July 2008
(pre-registration/welcome drink 1st July 2008)

Journey to Zurich
By plane to Zurich Airport (International/European flights)
EuroAirport Basel (European flights)
From Zurich Airport there is a train to Zurich Hardbrücke → www.zvv.ch (Visitors/english)

Conference hall
Novotel Zurich City-West
(Hotel reservation form → website conference link available from 1st February 2007)

Conference cost (estimate)
Paid by 31 December 2007: CHF 325 / € 200 / $ 250 (incl.coffee break/lunch)
Paid after 31 December 2007: CHF 360 / € 225 / $ 280
On-site registration: CHF 400 / € 250 / $ 310

Accommodation (estimate)
NOVOTEL**** (special price CHF 170 / € 105 / $ 132, double room, excl. breakfast)
(www.accorhotels.com – hotelcode: 2731)

IBIS** (CHF 140 / € 86 / $ 108, double room, excl. breakfast)
(www.accorhotels.com – hotelcode: 2942)

ETAP* (CHF 85 / € 52 / $ 65, single room, excl. breakfast;
1-2 addit. person(s) plus CHF 10 / € 6 / $ 8)
(www.accorhotels.com – hotelcode: 3184)

We invite Speakers to contribute a presentation. Speakers who are interested please contact:
silke.brodbeck@gmail.com

For further information please contact:
www.wissenschaftlicher-dienst.ch
or
sabine.hess@stp.stzh.ch
andreas.schweizer@stp.stzh.ch
The Use of Digital Infrared/UV Photography, One-to-One Photography and Photography for Blood Detection

Jason Guffey, CSCSA, CBPE – Detective Sergeant, Stanly County Sheriff’s Office, Albemarle, North Carolina

Documentation of evidence is critical in many aspects of a case from simply recording the evidence at hand and its condition to enhancing details that may not be visible to the human eye. This lecture takes you through every step of capturing evidence from proper equipment needed, camera settings, and software; then tracks the steps needed from capturing the original image to necessary enhancements producing output comparisons (one to one fingerprints, ext.) for proper courtroom presentation. This lecture will also cover photography of invisible bloodstains which is one problem with which Forensic or Crime Scene Photography has the most difficulty. It will also address the IR and UV application which includes counterfeit documentation, forgery investigations, gun shot residues, biological trace evidence and laser trajectory for shooting reconstruction.

Advanced Forensic Digital Imaging for Footwear, Blood Patterns and Fingerprints

Esther Neate – Independent Forensic Imaging Specialist, Wiltshire, United Kingdom

Since 1992 I have been creating new digital & photographic techniques to enhance forensic evidence. Many of these are now used by Police and other Forensic agencies around the world.

During the past few years I have been developing:

- The use of colour channels (HIS, YIQ, HSV, RGB) for background removal and the enhancement of blood detail developed with Luminol or Blue Star.
- FFT on 12 bit images to remove multiple backgrounds, and amplify image detail.
- Footwear specific enhancement software (for gel lifts, photographs, footwear casts etc) and identification tools including measurements and footwear charts.

Bloodstain Pattern Identification on Topics of Bloodstain Pattern Analysis – A Panel Discussion

Moderators: Michael J. Van Stratton – Chair of the Bloodstain Pattern Analysis Subcommittee
            Carl Agner – Chair of the Bloodstain Pattern Analysis Certification Committee

This discussion will focus in on problems facing the bloodstain pattern examiner. Topics involving documentation, report writing, testifying in court, opposing experts and case preparation are open topics for discussion.

Blood Droplet Diameter versus Bloodstain Width: The Misconception

Mark Reynolds – Senior Forensic Investigations Officer, Western Australia Police

This presentation articulates the misconception portrayed by many authoritative texts on bloodstain pattern analysis regarding the relationship between blood droplet diameter and the width of a bloodstain following surface impact. The general, yet erroneous, tenet prescribed by many authors is that the maximum bloodstain width equals
the diameter of the casual blood droplet. Examination of empirical data clearly shows this not to be the case with a number of influencing variables.

**Microsoft® Office Excel 2003 and the Bloodstain Measurement Process**

Mark Reynolds – Senior Forensic Investigations Officer, Western Australia Police

This presentation describes the use of Microsoft® Office Excel 2003 AutoShape functions to computer fit theoretical ellipses over bloodstains in order to accurately and precisely measure the angle of blood droplet impact. Portability of computer equipment and digital image capture and transfer capability allows for on-scene measurement by the analyst. Further, this innovative technique results in the generation by process of savable, transportable and auditable electronic case file data.

**Two Suicide Victims from 12 Gauge Shotgun Blasts**

Craig C. Moore, CBPE – Adjunct Instructor, Hilbert College, Hamburg, New York

When the victim of a shotgun blast suffers and obvious fatal gun shot wound, the cause of the blood source erupts in less than a second yet the blood staining takes a greater amount of time to create.
## LITERATURE SEARCH FOR THE DISTANCE THAT BACKSPATTER TRAVELS

<table>
<thead>
<tr>
<th>Source</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bevel and Gardner, Bloodstain Pattern Analysis, 2nd Edition, CRC Press</td>
<td>4-5 feet</td>
</tr>
<tr>
<td>Boca Raton, Florida, 2002</td>
<td></td>
</tr>
<tr>
<td>James, Kish and Sutton, Principles of Bloodstain Pattern Analysis</td>
<td>up to 4 feet</td>
</tr>
<tr>
<td>Theory and Practice, Taylor and Francis, 2005</td>
<td>extremely fine spatter may often travel 6-12 inches</td>
</tr>
<tr>
<td>MacDonell, Bloodstain Patterns, 2nd Revised Edition</td>
<td>3-4 feet</td>
</tr>
<tr>
<td>Laboratory of Forensic Science, Corning, New York 2005</td>
<td></td>
</tr>
<tr>
<td>Sutton, Bloodstain Pattern Interpretation Short Course</td>
<td>3-4 feet</td>
</tr>
<tr>
<td>Memphis, Tennessee 1998</td>
<td></td>
</tr>
<tr>
<td>DeForest, Gaensslen and Lee Forensic Science – An Introduction to Criminalistics, McGraw Hill, New York, New York 1983</td>
<td>3 feet, rarely further</td>
</tr>
<tr>
<td>Eckert and James, Interpretation of Bloodstain Evidence at Crime Scenes, Eckert and James, CRC Press, Boca Raton, Florida 1989</td>
<td>2-3 feet</td>
</tr>
</tbody>
</table>

I.A.B.P.A. News 31 September 2007
<table>
<thead>
<tr>
<th>Source</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karger, Nusse, Schroeder, Wustenbecker and Brinkman Back Spatter from Experimental Close-range Shots to the Head - I. Macrobackspatter, Int. J Legal Medicine, 109: 66-74, 1996</td>
<td>72-119 cm &lt;br&gt; (2’4”-3’10.9”) &lt;br&gt; Majority of stains &lt;br&gt; 0-50cm (0-1’7.7”) &lt;br&gt; Macro &gt; 0.5 mm</td>
</tr>
<tr>
<td>Karger, Nusse, Trogert and Brinkman, Back Spatter from Experimental Close-range Shots to the Head – II. Microbackspatter and the Morphology of Bloodstains Int. J Legal Medicine, 110: 27-30, 1997</td>
<td>Majority 0-40 cm (1’3.7”) &lt;br&gt; Maximum 69 cm (2’3”) &lt;br&gt; Micro &lt;0.5 mm</td>
</tr>
<tr>
<td>Karger, Nusse and Bajanowski, Back Spatter on the Firearm and Hand in Experimental Close-Range Gunshots to the Head American Journal of Forensic Medicine and Pathology, 23(3), 211-213, 2002</td>
<td>14-199 cm &lt;br&gt; (0.5-6.5 feet) &lt;br&gt; Tissue</td>
</tr>
</tbody>
</table>
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-August 2007), 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 264 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.

The Phil Spector trial took the lion’s share of bloodstain pattern analysis testimony this summer. This is the trial about the death of Lana Clarkson, 40, who was found dead at Mr. Spector's Hollywood mansion in February 2003. Spector, 67, denies murder, claiming she shot herself.

BBC NEWS | Entertainment | Spector jury hears blood evidence
http://tinyurl.com/29sok3

Ms. Herold said blood spatter on the front and back of Mr. Spector's white jacket suggested he was standing within two feet of Ms Clarkson, with his hands raised, at the time of the shooting. She said: "Most of the bloodstains on the jacket are mist-like. You can barely see them." But when magnified 60 times, Ms. Herold said they showed that the "piece of fabric was within two to three feet of the bloodletting event". She added that the jacket was on Ms Clarkson's right-hand side and was "forward-facing and the arms had to be raised so the spatter could get on the back".

Spector Trial – Defence testimony
Los Angeles Times - CA,USA
http://tinyurl.com/yua8ra

Stuart James, a Fort Lauderdale, Fla., forensic science consultant who specializes in analyzing bloodstains, said his experiments show that airborne blood can travel as far as six feet. The prosecution has claimed that blood sprayed from a gunshot wound can go no farther than three feet because of gravity and air resistance.

Spatter expert says officer was lying, inquest hears
Canada.com - Hamilton,Ontario,Canada
http://tinyurl.com/2xhga9

"The version of Mr. Bush on Const. Koester's back, choking him, is not possible," Edmonton police Const. Joe Slemko told the coroner’s inquest into Bush’s death. The four men and one woman of the jury focused on a large-scale photo of Bush’s lifeless body slumped on a couch in the interview room where he was shot to death. Koester testified in May that Bush was lying on top of him, choking him into unconsciousness, when he realized he had no option but to draw his 9-mm pistol, reach around behind Bush and shoot him in the back of the head. Slemko said his examination of the blood stains on the wall behind the couch suggests Koester was either behind or to the side of Bush when he pulled the trigger.
Verdict: Jones found not guilty
Atkins Chronicle - Atkins, AR, USA
http://tinyurl.com/2yhz6

Tom Bevel, a forensic expert, told the jurors that in his opinion the blood on the light bulb was placed at the time of death because there were no blood clots found on the bulb.

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 2007 please contact Norman Reeves.

Note: 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.
Training Opportunities

September 10-14, 2007
Crime Scene Reconstruction I
Conroe, Texas

Instructors: Tom Bevel and Ross Gardner
Contact: Damien Hall
Tel: 936-538-3409
E-mail: damonhall@mctx.org

September 24-28, 2007
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 22-26, 2007
Bloodstain Pattern Recognition Course
Northwest Bloodstain Pattern Association
Edmonton, Alberta, Canada

Contact: S/Sgt. Jon Forsythe, RCMP
E-mail: jon.forsythe@rcmp-grc.gc.ca
Tel: 780-451-7471

December 10-14, 2007
Basic Bloodstain Pattern Analysis Workshop
Metropolitan Police Institute
Miami, Florida

Instructor: Toby Wolson, M.S.
Miami-Dade Police Department
Crime Laboratory Bureau
Forensic Biology Section
9105 N.W. 25th Street
Miami, Florida 33172
Tel: 305-471-3041
Fax: 305-471-2052
E-mail: Twolson@mdpd.com

May 4-9, 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

Training Announcements for the December issue of the 2007 IABPA News must be received before November 15, 2007
Editor’s Corner

I thank Fons Chafe from Canada and Michael Taylor from New Zealand for providing technical articles for this issue of the NEWS. It is encouraging to have input from our international members. It has been awhile since a bloodstain pattern analysis case has been published in our NEWS. If you have an interesting case that you would like published, please submit it for peer review.

I have spent a good portion of the summer working on the Phil Spector case in Los Angeles. One of the major issues in the case involved the identification and distribution of back spatter from an intra-oral gunshot wound and the distance that the millimeter and less size droplets will travel through air. I have researched the scientific literature for articles on back spatter and there is not an abundance of material available. A summary of the references on this subject that I located are presented in this issue. If anyone has additional articles or case references on back spatter issues, please send them in and I will include them in the December issue of the NEWS.

Paul Kish and I plan to present the Phil Spector case at the IABPA Conference in San Antonio in October and back spatter issues will be discussed as part of the presentation.

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

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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

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♦ Presented at meetings such as Annual Meeting of American Academy of Forensic Sciences (AAFS), Spring Meeting of The Southwestern Assoc. of Forensic Scientists (SWAFS), Annual Meeting of The Midwestern Assoc. of Forensic Scientists (MAFS), Annual Meeting of The Northeastern Assoc. of Forensic Scientists (NEAFS), Meeting of Mid-Atlantic Assoc. of Forensic Scientists (MAAFS), International Symposium on the Forensic Sciences (ANZFSS), Annual Meeting of Canadian Society of Forensic Science (CSFS), Promega's International Symposium on Human Identification
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