

# Table of Contents

Table of Contents .....	1
IABPA 2005 Officers .....	2
President's Message .....	3
RESEARCH ARTICLE - Enhancement of Bloodstains on Washed Clothing Using Luminol and LCV Reagents Thomas W. Adair and Rebecca L. Shaw .....	4
TECHNICAL NOTE - The Use and Limitations of Luminol in Bloodstain Pattern Analysis James O. Pex M.S. ....	11
Science in Bloodstain Pattern Analysis Ed Bernstein .....	16
The First European IABPA Region V Training Conference Middelburg, Zeeland The Netherlands .....	20
Abstracts Of Papers Presented At The IABPA Annual Conference in Santa Barbara, California October 5-7, 2005 .....	23
Minutes of the International Association of Bloodstain Pattern Analysts Annual Business Meeting in Santa Barbara, California October 7, 2005 .....	32
2006 International Association Of Bloodstain Pattern Analysts Annual Training Conference, Corning, New York .....	37
Bloodstain Pattern Analysis in the News Alexei Pace .....	38
Abstracts of Recent BPA Related Articles Published in the Scientific Literature ....	39
Organizational Notices .....	40
Training Opportunities .....	41
Editor's Corner .....	42
Past Presidents / Associate Editors .....	43

# 2005 I.A.B.P.A. Officers

PRESIDENT

**William Basso**

bill.basso@police.lethbridge.ab.ca

**Vice President, Region I**

Pamela Bordner

pam.bordner@state.or.us

**Vice President, Region II**

John Frederick

jfrederi@nsp.state.ne.us

**Vice President, Region III**

Iris Dalley

irisd@osbi.state.ok.us

**Vice President, Region IV**

LeeAnn Singley

copsci2@msn.com

**Vice President, Region V**

Leif S. Petersen

schionemann@myinternet.dk

**Secretary / Treasurer**

Norman Reeves

norman@bloody1.com

**Sergeant at Arms**

Brian Kennedy

bkennedy@bloodscene.com

**Legal Representative**

Mark Seiden

markseiden@markseidenlaw.com

**Historian**

Herbert MacDonell

forensiclaboratory@stny.rr.com

## President's Message:

Seasons Greetings!

As I gaze out the window at the snow gently falling, I realize that the end of 2005 is fast approaching. Where has the year gone! I hope the festive season brings thoughts of peace, joy, and hope for the coming New Year.

I would like to thank those of you who were able to attend our 2005 Conference in Santa Barbara, California. I'm still receiving e-mails in regards to a great conference, beautiful city, and a wonderful job done by Charlene Marie. If you made a presentation at the conference, I'd encourage you to share with those who were unable to make it. Please consider preparing an article for the "NEWS" including a summary of your case presentation and a few photographs. There was a lot of great material worth sharing.

A special thanks to Charlene Marie for bringing us to her "home". THANKS Char, for all your time and dedication, and for organizing a terrific conference. Char, I still haven't seen the movie Sideways, however look forward to sitting down with a bottle of Merlot and watching it one of these nights. I would also like to thank those individuals who traveled great distances to be with us again this year. It was very nice to see our European friends, as well as, those from Australia, New Zealand, and South Korea. I thank you for attending. If you missed us this year, I hope you're able to join us next year in Corning, NY.

Our IABPA By-laws have recently been up-dated and will be posted on the website in short order. Thanks to Joe Slemko for keeping us online and updated. On behalf of all the Officers of the IABPA, I extend our warmest holiday wishes to you, your family and loved ones. Have a very Merry Christmas and a Happy New Year.

*Take care of yourselves and be good to one another.*

William (Bill) Basso



## RESEARCH ARTICLE

### Enhancement of Bloodstains on Washed Clothing Using Luminol and LCV Reagents

Thomas W. Adair<sup>1</sup> and Rebecca L. Shaw<sup>2</sup>

#### Introduction:

Luminol and LCV are commonly used reagents to develop latent bloodstains on evidence and at crime scenes. Luminol was first used to detect latent bloodstains in 1937 (1). Since that time the use of luminol has become very popular with many law enforcement agencies. The application of luminol creates a blue/green color chemiluminescence from its reaction with hemoglobin. Observation and subsequent documentation of latent bloodstain reactions with luminol require near to total darkness for best results. Leuco-crystal Violet (LCV) is another commonly used latent blood reagent for evidence and crime scenes. Bodziak (2) reports that the Federal Bureau of Investigation laboratory has utilized LCV since 1993. Like luminol, the application of LCV to latent bloodstains creates a catalytic reaction with hemoglobin. Unlike luminol, however, the LCV reaction is visible in normal lighting. LCV stains latent blood a dark purple to black color allowing for easy observation and documentation on light colored surfaces. Bodziak does caution that visible bloodstains on fabric are best processed with DAB or Amido Black reagents.

This research investigates the use of luminol and LCV to develop latent bloodstains from clothing, which has been washed with a commonly available cleaning product. A second aspect of this research was to test the use of the phenolphthalein as a presumptive blood test on the washed clothing items. A search of the major English language forensic journals and textbooks relating to bloodstain pattern analysis did not reveal any study that specifically examined the use of reagents on washed clothing. Quickenden et. al. (3) conducted research on the effectiveness of luminol in detecting washed bloodstains from automobile interiors. One interesting observation of their experiments was the conversion of hemoglobin to methemoglobin from increased heat in the motor vehicle following the deposition of blood. This resulted in and increased (enhanced) sensitivity of the luminol reaction. Not surprisingly, the authors discovered that repeated washings of interior surfaces decreased the sensitivity of the luminol reaction compared to non-washed surfaces. The authors did note, however, that the cleaning of carpet with a water and soap solution removed only the surface staining, leaving a strong presence within the foam padding of carpeting. Large quantitative differences in luminol reaction were observed between various carpet styles and commercial cleaning solutions however. Creamer et. al. (4) conducted research to determine the effect of the luminol reaction following the use of a known interfering catalyst (bleach) on washed items. The authors noted that luminol is highly sensitive, capable of detecting nanogram traces of blood. While their experiments were conducted on nonporous ceramic tiles, they observed that interference from bleach dissipated after approximately eight hours. DeHaan et. al. (5) also conducted sensitivity experiments with LCV on both porous and non-porous surfaces. Their research indicated LCV could detect blood at a dilution of 1:10,000, considerably less than luminol.

---

<sup>1</sup>Senior Criminalist; Westminster Police Department, Colorado

<sup>2</sup>Senior Criminalist; Arapahoe County Sheriff's Office, Colorado

Gifford (6) reported a case study in which bloodstains were found on the clothing of a male victim who had been discovered in water six days following his death. The author conducted experiments on bloodstained clothing in moving and stagnant water and found that bloodstains would not remain on the clothing after 30 minutes in moving water and not more than three hours in stagnant water. Certainly the action of the washing machine will dissipate blood at an even faster rate. Following his experiments, Gifford concluded that diffused blood still visible on the victim's wet or washed clothing was deposited after the clothing was removed from the water source (in that case a stream).

### **Materials and Testing Methods:**

All experiments were conducted at the Arapahoe County Sheriff's Office Crime Laboratory in Centennial, Colorado in July of 2005. Whole horse blood obtained from a local veterinarian hospital was used for all experiments. Quickenden and Cooper (7) experimented with the luminol reaction using both human and bovine hemoglobin and found no significant difference in luminol reactions. Ten white colored Haynes brand "signature collection" 100% cotton undershirts were used for these experiments. The shirts had been worn for approximately 6-8 months prior to experimentation but had not previously been stained with blood. There was no visible discoloration or staining in the testing areas prior to the experiments. An eleventh shirt of the same condition was used as a control. The shirts were labeled #1-11 near the neckline with a black Sharpie brand marker (designations "B" and "F" for back and front). Three different types of bloodstain patterns were produced on both the front and back of each shirt (Figure 1).



**Figure 1. Overall view of front of shirt # 5 with three bloodstain pattern locations.**



**Figure 2. Close view of shoe impression in blood on front of shirt.**

Footwear impressions were produced by coating the outsole with a thin layer of blood, stepping on butcher paper to remove excess blood, and then stomping on the shirt (Figure 2). The projected bloodstain pattern (Figure 3) was created by forcing blood through a syringe onto the shirt. This created larger sized bloodstains with spinous processes. Misting bloodstain patterns were created by spraying the liquid blood through an aerosol sprayer (Figure 4). This created a very fine misting of blood characterized by a blood droplet diameter of less than 1mm. Paper inserts were used to prevent soak through from one side of the shirt to the other. The shirts were allowed to dry for one hour prior to washing. Washing and drying were done in stackable Frigidaire “Gallery” model units. Tide liquid laundry detergent with color safe bleach alternative was used for all washings. No other items were washed with the test shirts.



Figure 3. Close view of projected bloodstain pattern on front of shirt.



Figure 4. Close view of misted bloodstain pattern on front of shirt.

Shirts #1-5 were washed from one to five times with no drying cycles. Shirt #1 was washed a single time, shirt #2 two times, and so on. A new application of detergent was used for each wash cycle. Shirts #6-10 were washed in the same manner with a drying cycle of approximately one hour between each wash cycle. Shirt #6 had one wash and dry cycle, shirt #7 had two wash and dry cycles, and so on. Shirt #5 had five consecutive washing cycles with no drying of the shirt, while shirt #10 had a total of five alternating washing and drying cycles. The control shirt was subjected to a single wash cycle with detergent. After the final designated cycle each shirt was photographed in normal lighting. Each shirt showed a significant diffusion of blood staining over a large area that had a dull green colored appearance (Figure 5). A small sample of the green colored stain area (approx. 1cm<sup>2</sup>) was cut out from the sleeve of each shirt and tested with the phenolphthalein reagent. Samples were taken from the sleeve band area from each shirt where no direct bloodstaining had occurred while setting up the experiments. The shirts were then cut along their outer seams to

separate the front and back halves of the shirt. One half of the shirt was then processed with the luminol reagent while the other was processed with LCV. All photographs were taken with both a Nikon D100 and D2X Digital cameras. Good quality luminol exposures were shot at F3.5 between 15-25 sec.



Figure 5. Overall view of shirt # 5 showing dull green appearance after washing.

### Discussion:

Immediate strong and positive phenolphthalein results were obtained on each shirt tested. Application of the phenolphthalein reagent, and subsequent hydrogen peroxide, were done directly on the fabric. This resulted in a “ring” appearance of the color reaction. In addition, similar sized areas were tested following the application of both luminol and LCV. Positive phenolphthalein reactions were achieved with both luminol and LCV treated shirts. All reagent and phenolphthalein testing on the control shirt was negative. LCV reactions on all shirts were immediate and pronounced. The reaction area appeared uniform and homogenous with no discernable or meaningful pattern recognition possible (Figure 6). Previous studies (8) have shown LCV to be a reliable latent blood reagent on unwashed clothing. The luminol reagent produced much better results on the tested clothing. Figures 7 and 8 show the luminol results on shirts #5 and #10. These shirts represent the materials that should show the lowest degree of luminol sensitivity due to their repeated cleanings. The projected bloodstain patterns were clearly visible and discernable in all ten

shirts tested (Figures 7-9). Conversely, the misting pattern was not discernable on any of the ten tested shirts. The footwear impressions were visible with luminol on shirts numbers # 2, #3, and #4 (Figure 9), and in plain view on shirts #7 and #8. The inconsistency regarding the presence or absence of footwear impressions may be due to varied degrees of blood volume and stomping pressure on the tested shirts. None of the footwear impressions contained sufficient detail for an identification with the known shoe, however, the physical size and design of the footwear was discernable in most cases.

The greenish colored bloodstain patterns on the shirts following the first wash cycle were likely the result of the bloodstains not being completely dried prior to washing. This staining presents several interesting challenges for the bloodstain pattern analyst. First and foremost, the visible and reagent staining bore little overall resemblance to the initial bloodstaining. While the projected and transfer (footwear) patterns could be seen in most cases, they were often intermingled with the “background” staining. Analysts who interpreted these diffused stains to be the result of any action other than washing would be incorrect in their analysis (in this specific case at least). In a similar fashion, the “background noise” created by this staining made identification of the initial stain areas more difficult using visible light. In the case of the misted blood it is unclear to the authors if the staining was actually present, albeit masked, by the additional staining caused by the washing cycles, or if it was completely destroyed by the washing cycle(s). The areas of projected blood and several of the footwear impressions were visible, but it was impossible for us to determine conclusively any sequence to the blood deposition on the “background” and “foreground”.



Figure 6. Overall view of shirt # 3 after LCV processing.

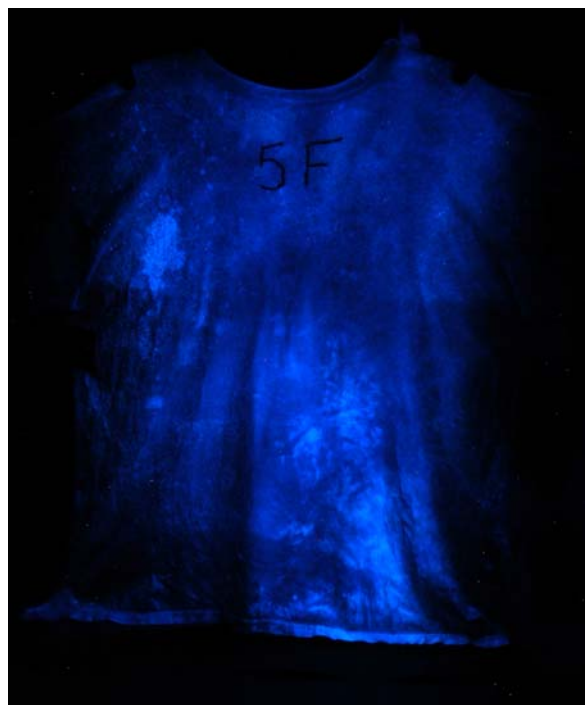


Figure 7. Overall view of luminol reaction on shirt # 5.



Figure 8. Overall view of luminol reaction on shirt # 10. impression



Figure 9. View of projected pattern and footwear on shirt # 3

### Conclusion:

Investigators may be presented with washed clothing that is believed to contain bloodstains from violent acts such as homicide, assault, or sexual assault. Suspects, their associates, or victims may wash clothing following bloodshed, thereby destroying blood evidence and complicate the reconstruction process. Diluted bloodstains resulting from machine washing may not be visible especially on dark colored clothing. In such cases, the use of a chemical reagent may be the only acceptable method for developing latent bloodstains. Regardless of which reagent is used to visualize latent bloodstains, analysts should use caution when interpreting diffused or diluted bloodstain patterns occurring over a large area of the clothing in question. This level of saturation may be the result of the washing process and may not relate to any one specific blood letting event. This research supports the use of luminol as an effective reagent to visualize latent bloodstain patterns on washed clothing. LCV, while an effective blood reagent on many washed and unwashed surfaces (personal observations of the senior author), did not yield acceptable results in this study. Analysts are cautioned in using LCV on washed clothing or other washed porous items. Furthermore, our research indicates that phenolphthalein will yield presumptively positive results on washed clothing, even after application of these two chemical reagents. Analysts are encouraged to report similar testing results to aid in defining the sensitivity and proper usage parameters of LCV and luminol on cleaned porous and non-porous surfaces.

## References:

1. Specht, W. 1937. Die Chemiluminesenz des Hamins, ein Hilfsmittel zur Auffindung und Erkennung foensisch wichturger Blutspuren (The Chemiluminescence of Hemin as a means of finding and recognizing blood traces of forensic importance). *Angew. Chem.* 50:155-157.
2. Bodziak, W.J. 1996. Use of leuco crystal violet to enhance shoe prints in blood. *Foren. Sci. Int.* 82:45-52.
3. Quickenden, T.I., C.P. Ennis, and J.I. Creamer. 2004. The forensic use of luminol chemiluminescence to detect traces of blood inside motor vehicles. *Luminescence* 19:271-277.
4. Creamer, J.I., T.I. Quickenden, L.B. Crichton, P. Robertson, and R.A. Ruhayel. 2005. Attempted cleaning of bloodstains and its effect on the forensic luminol test. *Luminescence* (in press).
5. DeHaan, D.J., Clark, J.D., Spear, T.F., Oswald, R., and Barney, S.S. Web Posting at [www.latent-prints.com/cac\\_blood.htm](http://www.latent-prints.com/cac_blood.htm).
6. Gifford, W.D., 1999. Bloodstain Survival in Water. *IABPA News* 15(2):1-6.
7. T.I. Quikenden and P.D. Cooper. 2001. Increasing the specificity of the forensic luminol test for blood. *Luminescence* 16:251-253.
8. Adair, T.W. 2005. Casting two-dimensional bloody shoe prints from concrete, fabric, and human skin: a review of several methods with recommendations. *IABPA News*. March 2005:4-8.

### Tamper Resistant Tapes



Our matte, acetate- based tapes are pre-packaged in a convenient box-dispenser and measure 1 3/8" x 108'. These tapes are easily broken when used to seal evidence. They are classified as "very aggressive" because of their tackified adhesive. They adhere in temperatures as low as 20 degrees below zero and will retain their adhesion in temperatures as low as 40 degrees below zero. These tapes will exceed all of your expectations!

You can find any tape or label by logging onto:

<http://www.csi-supply.com/index.asp?cat1=942>



There are five great ways to contact **CSI Supply, LLC**:

1. Customer Service: 1.888.444.3237, Available Monday through Friday 9-5 (CST)
2. FAX: 816.241.2743
3. E-mail: [customerservice@csi-supply.com](mailto:customerservice@csi-supply.com)
4. On-line catalog: [www.csi-supply.com](http://www.csi-supply.com)
5. Mailing Address: 1616 N. Corrington • Kansas City, MO 6412

# **TECHNICAL NOTE**

## **The Use and Limitations of Luminol in Bloodstain Pattern Analysis**

James O. Pex M.S.

### **Abstract**

Luminol has been utilized for many years as a searching technique for the detection of latent blood stains and has its place in forensic investigations when properly used. It has been used for the detection of blood since the 1930s (1-2). The sensitivity to potential bloodstains without color conflict makes this a useful tool for crime scene investigation. Its use generally requires a darkened environment for better observation of the chemical luminescence reaction. Luminol does not confirm the presence of blood, nor can it be used to evaluate latent impact bloodstain patterns. The proper use and potential problems were reviewed.

### **Introduction**

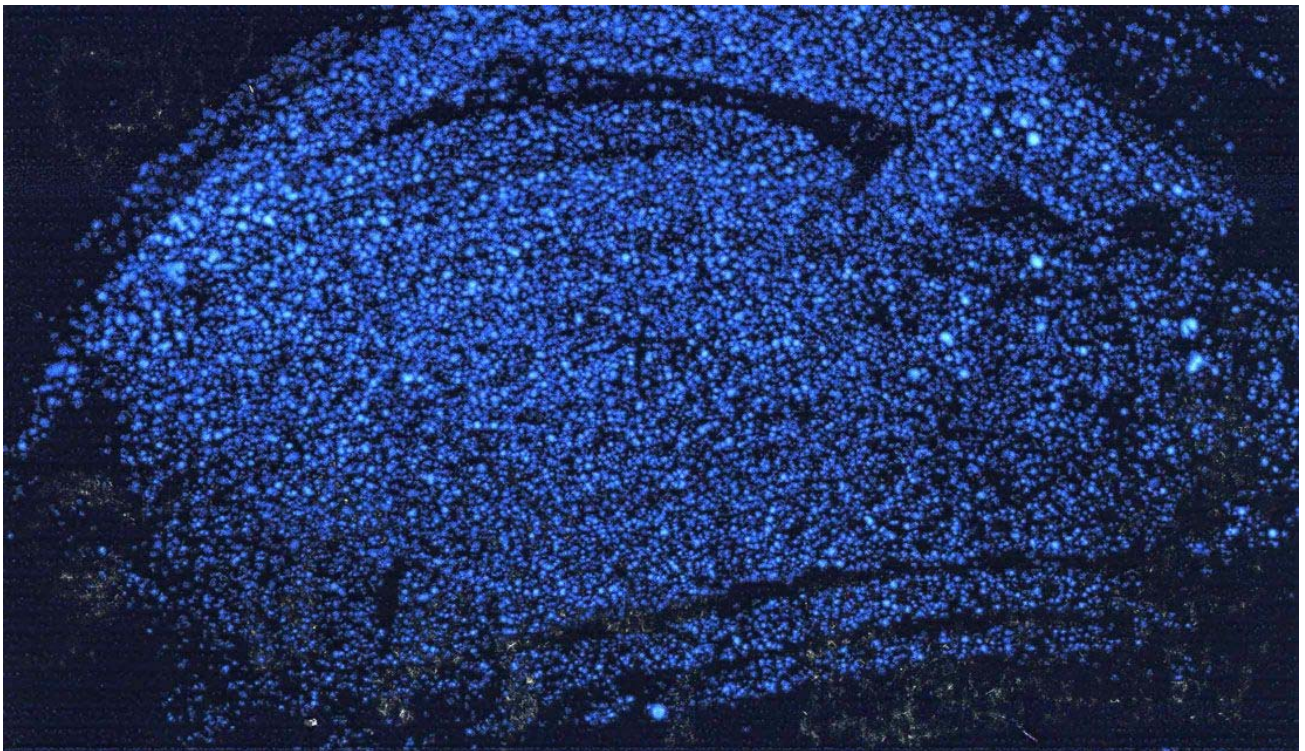
Luminol (3 aminophthalhydriazide), when mixed with water in a basic solution will chemiluminesce in the presence of blood, some metals and certain other substances (3). Luminescence is often confused with fluorescence. Luminol will emit energy photons due to a chemical reaction. These photons are in the blue region of the visible light spectrum. Fluorescence occurs when a chemical absorbs light of a certain wavelength during excitation and emits light of a longer wavelength when going back to ground state (4). Luminol is mixed with a basic substance such as sodium carbonate and allowed to dissolve in distilled or deionized water. Prior to use, a peroxide is added. This solution is sprayed onto a surface often utilizing using an ordinary household hand sprayer. Better results are obtained with the use of a power sprayer. The environment to be sprayed must be as dark as possible in order to see luminescence emitted by a reaction to blood, metals or other substances. Under optimum circumstances, blood diluted to 1:100,000,000 has been detected. This is an excellent screening test in circumstances when blood is suspected, but not visible. An interesting observation is that this substance may react better with aged blood than fresh blood.

### **Experiment Conducted**

The intent of this experiment was to visualize and record the luminol reaction on a blood swipe utilizing digital photography. This should document luminescent droplets that have originated from the sprayer and not the reaction on the surface that his being sprayed. As a bloodstained surface, a paper foam board was smeared with a dilute human blood solution for testing. The concentration was sufficient to provide a pink coloration on the white surface (Figure 1).



*Figure 1. Appearance of diluted bloodstain on foam board.*



*Figure 2. Positive luminol reaction on bloodstain in Figure 1 depicting the appearance of small stains due to the effect of the spraying mechanism.*



*Figure 3. Appearance of bloodstain on carpet at crime scene prior to luminol application.*



*Figure 4. Positive luminol reaction on bloodstain in Figure 3 depicting the appearance of small stains due to the effect of the spraying mechanism.*

The foam board was sprayed with luminol utilizing the hand sprayer in near total darkness. A Digital Canon D10 with an F1.4 lens was utilized for luminal photography. The camera was set on manual at 1600 ASA with a two second exposure time.

## **Discussion**

Long exposure times, as sometimes used in luminol film photography, are additive in relation to the area sprayed. The eye may see individual small droplets, but the film will add all the droplets together during the exposure and give a blurred pattern result. The new digital cameras, such as the Canon D10 can photograph images in low light with shorter exposure times and capture the individual droplets created by the sprayer (Figure 2). Figure 3 demonstrates a dried bloodstain on a carpet at a crime scene. Figure 4 demonstrates the stain when sprayed with luminol. Although the stained area did not exhibit small spatter-like patterns, the appearance with the luminol reaction revealed numerous small stains in a size range similar to those seen in an impact bloodstain pattern.

If you utilize luminol as a blood search technique, the following caveats must be addressed:

- Luminol does not positively identify blood. This procedure requires a confirmatory test before blood is identified. Although luminol may be more sensitive than the confirmatory tests, this does not alleviate the need for confirmation. In the absence of confirmation, it cannot be stated that blood is present.
- Luminol is subject to degradation and contamination. Autoluminescence may occur if the water utilized in the preparation of the luminol reagent was obtained from a metal faucet or metal pipes within the water delivery system. Corrosive substances such as sodium peroxide may have a metal lid on their containers. Due to its high sensitivity, it does not take much contamination for autoluminescence to begin and render the reagent useless.
- Luminol, once used, will oxidize when dry and cause autoluminescence when the area is re-sprayed at a later date.
- A positive luminol reaction and a DNA profile from that area does not identify blood. It is possible that the DNA profile originated from another biological fluid such as saliva or semen in the same area.
- Active insects as well as their by-products often react with luminol and may simulate spatter

## **Case Examples**

In an actual case, a man was accused of shooting his girlfriend. The local crime laboratory examined the man's clothing visually, microscopically as well as the general application of phenolphthalein. No blood was detected. The clothing was turned over to an independent expert who applied luminol with a hand sprayer to the garment and concluded there was high velocity impact bloodspatter pattern present. The positive areas were circled and the clothing was returned to the crime laboratory for confirmation. Confirmation techniques for blood were negative; however the area was swabbed and tested for DNA. The victim's DNA profile was found on the garment. Since the accused and the victim lived together, it would not be unusual to find her DNA on the garment. After these tests were completed, the independent expert wrote a report for the prosecution and indicated there was high velocity impact spatter on the garment and the person wearing the garment was within two feet of the victim at the time she was shot. Incredulous as it may seem, the Luminol reaction (no photography) was considered

confirmatory for blood and in a second leap of faith, a pattern type identified. Fortunately, the crime laboratory exposed the bad science to the prosecutor and the jury never saw the report.

Another case involved a transient suspected of a homicide. During the investigation the transient's trousers were tested for blood utilizing several methods including luminol. A knife pattern was observed on the front of the trouser leg utilizing Luminol. Further tests of this area for blood were negative. It was later determined through an interview that the transient was slicing an onion and wiped the knife on the leg of his trouser.

In a third case, a person was murdered in a house, dragged across a red carpet to the garage and ultimately removed from the scene. No bloodstains were visible in the house. Luminol was utilized and a possible blood trail from a bedroom, across the red carpet to the garage was detected. These areas were marked and samples of carpet were removed. Utilizing confirmatory tests the trail was determined to be blood.

## **Conclusions**

In light of these described limitations, luminol is a useful investigative and blood search technique tool when properly utilized and interpreted. Luminol is not specific for blood or any other biological fluids. It will react with a number of substances such as certain metals and their peroxides as well as plant peroxidases including beet and onion juices. In light of the above listed limitations, Luminol can be used to locate latent blood transfer patterns and other larger bloodstain patterns that may have been subjected to an attempted cleanup process. Luminol should never be used as a technique to interpret small blood spatters often created as the result of beating, stabbing or shooting events (5). The problem is that the spray bottle apparatus used to apply the luminol reagent often projects luminescent droplets in a similar size range as spattered blood. One may observe chemiluminesce creating the pattern as it is applied.

## **References**

1. McGrath, J., The Chemical Luminescence Test for Blood. Forensic and Chemical Applications. British Medical Journal, Vol. 2 8 Aug. 1942, pp. 156-157
2. Lytle LT, Hedgecock DG, Chemiluminescence in the Visualization of Forensic Bloodstains. J. Forensic Sci 1978; 23: pp. 550-555.
3. Proescher, F. and Moody, A.M., Detection of Blood by Means of Chemiluminescence. J. Laboratory and Clinical Medicine, Vol. 24, No. 11, Aug. 1939, pp. 1183-1189
4. Willard, H., Merritt, L., Dean, J., Instrumental Methods of Analysis. Van Nostrand Company, New York, NY, 1974
5. Pex, J.O. and Vaughan, C.H., Observations of High Velocity Bloodspatter on Adjacent Objects, Journal of Forensic Sciences, JFSCA, Vol. 32, No 6, Nov. 1987, pp.1587-1594

## Science in Bloodstain Pattern Analysis

Ed Bernstein

Science is the supporting structure of the field of bloodstain pattern analysis. If it were not, testimony to this important form of evidence would be inadmissible. Nevertheless, the extent to which the analysis of bloodstain patterns is permeated by scientific thought and principles may be overlooked at times. In this article, I will point out several areas of the field that should meet high scientific standards if they are to play a constructive role in the legal system. These areas include:

1. The recognition of bloodstain patterns
2. The classification of bloodstain patterns
3. The assignment of cause to bloodstain patterns
4. The development of crime-scene reconstructions
5. The design and interpretation of demonstrations to be used in court.

In response to the U. S. Supreme Court's 1993 Daubert decision<sup>1</sup>, practitioners of many disciplines in forensic science have sought to show that their fields of expertise meet the criteria for admissibility delineated in Daubert. Because of its specific subject matter, the Daubert decision dealt with "scientific knowledge." Six years later, in *Kumho Tire Co., Ltd., et al. v. Carmichael et al.*<sup>2</sup>, the court explicitly extended its support for the application of the Daubert factors ("criteria" below) to expert testimony by "...other experts who are not scientists." Thus, under Daubert both scientists and non-scientists can testify to technical matters so long as methods employed in their work are scientifically valid and meet, at least in part<sup>3</sup>, the following criteria: 1) the method has been or can be tested, 2) it has been peer reviewed or published, 3) it has a known or determinable rate of error, and standards exist for its use and 4) it has attracted widespread acceptance in a relevant field of activity. The court also emphasized that these factors apply to principles and methods rather than to conclusions.

What are the principles and methods underlying the analysis of bloodstain patterns found at crime scenes or on items of evidence? There are two classes of principles and methods used in bloodstain pattern analysis: *physical* and *intellectual*. For example, the laws of physics are the principles underlying the methods used to explain trajectories of blood drops and to estimate areas of origin of spattered blood. The corresponding methods in these determinations are various means of making measurements and calculations. Such methods have been thoroughly tested, have readily determinable errors, have been included in peer-reviewed publications and are widely accepted. Thus, if it were to be considered *in vacuo*, testimony by a qualified expert on determining trajectories or areas of origin would likely not succumb to opposition based on Daubert.

Principles and methods also govern the recognition and classification of patterns<sup>4</sup> and the assignment of general or specific causes to patterns. The first step in bloodstain pattern analysis is recognition that a pattern is present. Once a pattern has been recognized, it may be classified as to type. Recognition involves making an adequate examination of a well preserved and documented

---

<sup>1</sup> *Daubert, et al. v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

<sup>2</sup> 526 U.S. 137 (1999).

<sup>3</sup> The court noted that the four factors do not constitute a checklist such that all criteria must be met.

<sup>4</sup> It is important to note that many bloodstain patterns at crime scenes are of complex origin and may not fit neatly into an established class. In this article, the terms "stain" and "pattern" are used with the understanding that greater complexity may be involved.

crime scene, evidence from a crime scene or corresponding photographs. The methods used to examine crime scenes or evidence are visual observation with the unaided eye, visual examination with the aided eye including illumination with light of various energies, microscopy, chemical testing and chemical enhancement. Such procedures are based on established physical principles and they readily comply with the Daubert criteria.

The fundamental tool in classifying patterns is visual observation. This approach is generally similar to practices in other scientific disciplines, such as biology and medicine, among others. For example, in the field, ecologists classify species by their appearance. Similarly, pathologists may classify cells as malignant or normal by microscopic examination of their morphology. Forensic pathologists classify wounds by their appearance.

In bloodstain pattern analysis, however, classification of a stain or pattern is often tantamount to assigning cause to the stain. Names of stain or pattern types such as “impact spatter,” “compression transfer,” “expired blood,” “cast-off,” “spurt” and “blood dripping into blood” attribute *cause* at the same time they describe *appearance*. For example, if an expert classifies a stain on the wall as “impact spatter,” the inference that a blow was delivered to a blood source in proximity to the wall follows immediately from the classification. This can be problematic because it introduces cause before a full set of observations has been made. If bloodstain pattern analysts were to adopt cause-free stain nomenclature, it would diminish the possibility of such pre-analysis assignment of cause. It is, however, necessary to deal properly with causality because testimony to bloodstain patterns would not be relevant evidence if it did not deal with it. It is not helpful to juries to know the name of a stain; they need expert opinion on what could have caused the stain, what could not have caused it, and how various aspects of the crime scene provide context for the bloodstain patterns that we use in reconstruction.

The assignment of cause goes beyond documenting appearances; it is inherently an element of reconstruction. Since the role of science in reconstruction is a theme of this essay, reconstruction should be defined: a “*reconstruction*” is composed one or more inferences made about activities surrounding the commission of a crime; reconstruction is a scientific process and thus must concern only physical matters and must be based on and supported by the results of examining physical evidence. As more scientific evidence is amassed, the process of integrating and interpreting it and incorporating it into a reconstruction poses a high-order scientific challenge.

Making inferences is an intellectual principle in all of science; its use in bloodstain pattern analysis ought to meet Daubert standards. Thus, the problem that needs to be addressed is how to ensure the reliability of inferences. Limiting the input (physical evidence) and output (physically supported inferences) of reconstruction to physical parameters and observations is the key to reliability because it focuses on the objects of science.

Every scientist who has made statements to colleagues that went beyond what the data specifically allowed is likely to have experienced the knee-jerk intolerance that scientists have for such remarks unless they are clearly qualified as speculation or as hypotheses yet to be tested. Scientists know from their training and experience not to say more to other scientists than can be supported by physical evidence. In the area of bloodstain pattern analysis, a scientific principle determining the reliability of inferences might be, *our inferences are most reliable if we limit them strictly to physical matters, and do so in the most conservative fashion possible*. For pedagogical purposes, here are two fictitious examples of testimony<sup>5</sup>:

---

<sup>5</sup> Any similarity to the testimony of crime scene analysts, living or deceased is purely coincidental.

1. Based on the appearance of this pattern, the sizes and directionality of its constituent droplets, my determination of an approximate area of origin of the spatter, on the report of the medical examiner and on the photographic documentation of the scene, including images of a bloody baseball bat with hair fragments on it located on the floor approximately 3 feet from the body, it is my opinion that the pattern arose by impact of the bat on the head of the victim while it was approximately 2 feet from the wall at the center of the pattern and 18 inches above the floor. It is possible, though, that some elements of the pattern arose from cast-off from the bat and from blood expired from the airway of the victim.
2. I have been present at more than 300 crime scenes. Based on my experience, it is my expert opinion that crimes of extraordinary violence such as this one are perpetrated by psychotic individuals. There is a large soak-transfer stain on the back of the victim's shirt. There is cast-off on the ceiling and on the east and west walls. Because all nine of the stab wounds in the victim's back were located within a relatively small area, I believe it likely that at least two people, possibly more, committed this crime, and that the victim was held by one and stabbed by another. People who plan murders such as this generally enter by some furtive route, such as a window. Most often, they take a souvenir from the scene to relive the exhilaration of their crime. We were unable to find the victim's underpants. The rear door was open; the perpetrators evidently left by that route.

The first of these examples is science; the second is lay opinion sprinkled with a few technical terms. You may ask yourselves what kinds of observations could convert the second example to science. I think your close, critical examination of this example could be instructive. It has become dogma that bloodstain pattern analysts should include demonstrations in their testimony whenever possible. I think this is a good idea, and I do it when I testify. Here I treat the matters of how such demonstrations are designed, why they might be designed and what one can conclude from them. I introduce the topic by comparing a demonstration to an experiment.

Ideally, scientists perform experiments in order to determine the effect of a single variable on the behavior of a system. All other variables must be held constant to ensure that the results can be attributed to changes in the variable of interest. An example of an experiment often carried out in bloodstain pattern analysis training is to vary the height from which a blood drop is allowed to fall to the floor. The height is the variable of interest. The size and shape of the resulting stains are measured and recorded. After reproducing the experiment a few times and averaging the data, the experimenter reviews and interprets the results. Perhaps the result will be that between heights of 6 inches and 24 inches the stain becomes reproducibly larger. At a certain height the stain might reproducibly show changes in its shape, particularly at the edges. Needless to say, if more than one parameter were changed, results could not be interpreted. For example, if the properties of the target's surface varied at each change of height-of-fall, no statement could be made about the effect of either variable (height and surface) on the shape of the stain. Many demonstrations are not experiments. Consequently, findings in demonstrations may not allow the kinds of conclusions that might be drawn from experiments.

In my presentation at the 2005 Annual Training Conference in Santa Barbara, California, I showed a slide of a demonstration in which I hit a small pool of blood deposited on a horizontal surface with the palm of my hand. The pool was located about six inches from a vertical target, which was a piece of butcher paper. The resulting pattern resembled in general features a pattern on a wall adjacent to the body of a man who, according to the medical examiner, had been murdered by repeated blows to

the head with a blunt object. The purpose of this demonstration was to show that impact on pooled blood could generate a pattern resembling that photographed at the crime scene. It is clear, however, that other mechanisms, singly or in combination, could have produced the crime-scene pattern. One example might be expired blood.

The fact that I was able to produce a pattern by impact that resembled the crime-scene pattern in no way rules out the possibility that expired blood was present, possibly as a major contributor to portions of the questioned stain. The point is that such a demonstration is of very limited scientific value. Based on observations of the demonstration pattern, one can only make a statement of the type: *some features of patterns resulting from impact on pooled blood are present in the questioned pattern.*

The theme of this article is that science plays a greater role in our field than just underlying obvious physical phenomena. In my view, the most significant role of science in any technical discipline to which testimony may be given is to ensure that statements made by experts are bounded by established rules of scientific practice. The following list summarizes what I look for in my own work and testimony:

- Limit hypotheses and conclusions to physical entities
- Do not falsely eliminate competing hypotheses by using phrases such as:
  - “...the killer would have...”
  - “...the killer would not have...”
  - “...my demonstration shows that it could not have been...” (if it doesn’t)
- Pare your statements down to the minimum needed to communicate your firmest opinions so that they are scientifically sound

I invite the readers to contact me for any further discussion of these topics.

Ed Bernstein



# **The First European IABPA Region V Training Conference Middelburg, Zeeland The Netherlands**



**To be held at the beautiful,  
medieval City Hall,  
Middelburg, Zeeland, The  
Netherlands.  
15-17<sup>th</sup> February 2006**

**We invite Speakers to offer papers (research and case studies) and Delegates to register interest in this inaugural meeting.**

For details please visit the web site:

**[www.european-conference-iabpa.nl](http://www.european-conference-iabpa.nl)**



**Speakers currently include:**

Stuart James, Norman Reeves, Lee-Anne Singley, Martin Eversdijk, Mickle van der Scheer, Silke Brodbeck, Rob Spruit, Gillian Leak, Pete Smith, Chris Gannicliffe, Nigel Hodge and presentations from Tetra Scenes of Crime and Mason-Vactron Light sources.

**Further Details contact: [Peter.Lamb@fss.pnn.police.uk](mailto:Peter.Lamb@fss.pnn.police.uk)**



Dear Colleagues,

It is with great pleasure that I would like to welcome you to the first European IABPA Region V Training Conference to be held in Middelburg, The Netherlands. All participants will be offered a varied program with speakers from various countries. The conference will also provide opportunity to make new acquaintances and update contacts with colleagues.

The underlying theme of the Conference is to exchange experiences and techniques of bloodstain pattern analysis and IABPA matters on a European level. At this moment it is not very clear who is involved with bloodstain pattern analysis on the European level and the standards that one acts upon. The Conference should provide more clarity on these matters.

The conference will be held in the historical, picturesque City Hall of the town of Middelburg that dates from 1452. The host and organizer of the Conference is the Zeeland Police force.

Participants will be expected to arrive in Middelburg, The Netherlands on the 14<sup>th</sup> of February, 2006 prior to the start of the proceedings on the 15<sup>th</sup> of February, 2006. A dinner will be offered on Thursday the 16<sup>th</sup> of February followed by an informal gathering during which participants will be able to extend or maintain your network. The conference is expected to be useful and educational and it is anticipated that it will give the science and techniques of bloodstain pattern analysis a more prominent and fundamental position.

With great pleasure I look forward to welcoming you on the 14<sup>th</sup> of February in Middelburg, Zeeland, The Netherlands.

Yours sincerely,

Andre Hendrix  
Police Inspector and Deputy Chief  
F.T.O. Police Zeeland, The Netherlands

E-mail: [andre.hendrix@zeeland.politie.nl](mailto:andre.hendrix@zeeland.politie.nl)

All fields are mandatory

## REGISTRATION FORM

2006 INTERNATIONAL ASSOCIATION OF BLOODSTAIN PATTERN ANALYSTS ANNUAL TRAINING CONFERENCE MIDDELBURG, ZEELAND, THE NETHERLANDS. FEBRUARY 15, 16, 17th 2006. WEDNESDAY- THURSDAY-FRIDAY

Last name:	<input type="text"/>
First name:	<input type="text"/>
IABPA Member:	<input type="checkbox"/>
Name format for attendance certificate:	<input type="text"/>
Agency:	<input type="text"/>
Address:	<input type="text"/>
City:	<input type="text"/>
State:	<input type="text"/>
Zip code:	<input type="text"/>
Country:	<input type="text"/>
Telephone:	<input type="text"/>
Email:	<input type="text"/>
Spouse/Guest name:	<input type="text"/>
Will guest attend banquet: (50.00 euro additional)	<input type="checkbox"/>

### Conference Registration is:

175 euro if received by December 31, 2005  
200 euro after that date  
225 euro on site

### Make payable to: IABPA Europe Region V

42.15.41.628 – Politie Zeeland – ABNAMRO20021

For foreign payment add:  
BIC/SWIFT-code: ABNANL2A  
IBAN-nr: NL42ABNA0421541628  
IABPA Federal ID # 52-1597063

### MAIL OR FAX COMPLETED FORM TO:

Andre Hendrix  
Police Inspector & Deputy Chief  
F.T.O Police Zeeland  
Buitenruststraat 237  
4337 ER Middelburg  
The Netherlands  
Fax: (0031) 118 433314  
Tel: (0031) 118 433307  
E-mail: andre.hendrix@zeeland.politie.nl

### MAIL PAYMENT TO:

andre.hendrix@zeeland.politie.nl

### FOR CREDIT CARD PAYMENTS CONTACT:

Andre Hendrix  
Tel: ( 0031 ) - 118 433307  
Fax: ( 0031 ) - 118 433314

**ABSTRACTS OF PAPERS PRESENTED AT THE IABPA ANNUAL  
CONFERENCE IN SANTA BARBARA, CALIFORNIA  
OCTOBER 5-7, 2005**

**A Double Homicide in Manitoba**

Sergeant Bruce Prange  
Royal Canadian Mounted Police

This PowerPoint presentation deals with a double homicide of a retired couple in a Manitoba city. There were numerous impact sites in the residence. The suspect killed himself before this case went to trial.

**“Hidden” Bloodstain Evidence at a Stabbing Scene**

Detective Sergeant Jeff Scozzafava  
New Jersey State Police-South Crime Scene Investigation Unit

This presentation is the review of a 2004 homicide case involving an 81-year-old male victim. The victim lived in a 6-story retirement building along the southern New Jersey coastline in Wildwood, NJ. On June 14, 2004, a security check of the sixth floor of the building revealed an open door at the victim’s apartment. A security guard entered and found the victim’s body in a hallway near the living room. At autopsy, the victim was found to have suffered 157 stabbing and incise wounds. Although analysis of bloodstain patterns was conducted at the scene, this presentation focuses on bloodstain evidence needing forensic photographic enhancement and “hidden” bloodstain evidence, that refuted defense claims.

**eSCrime 3-Dimensional Bloodstain Pattern Analysis Software**

Philippe Esperanca  
French Gendarmerie Forensic Institut (IRCGN)

The eSCrime project, carried out by the University of Marne-le-Vallee and French Gendarmerie Forensic Institute, gave birth to a software solution allowing the reconstruction of a digital crime scene to analyze and visualize bloodstains in 3D environment. When a crime occurs in a room, the French Gendarmerie Forensic Institut crime scene investigators take pictures of bloodstains - once they have located them accurately. The location and shape of the bloodstains allow the computation of the 3D location of the bloodshed. eSCrime is a new software package, which helps the investigators to locate in a crime scene the computed origin of the examined bloodstains. As the same software allows modeling of the crime scene, it is easy to study the 3D virtual origin in a modeled environment.

**Right Conclusion – Wrong Case**

Lt. J. Steve Kohne

In the fall of 2003 William Howard was beaten to death behind a residence in Lafayette, IN. The investigation into his death was compounded, due to a fight that had occurred a week before at the same location. When defense experts returned with their conclusion, it was time to get to work and prove the bloodstain patterns that they were describing were in error.

## **R.C.M.P Bloodstain Pattern Analysis Certification**

Sergeant Geoff Ellis  
Royal Canadian Mounted Police

Sergeant Ellis will describe the certification process for R.C.M.P. Forensic Identification members training in Bloodstain Pattern Analysis.

### **A Bloody Mess in Texas**

Johnny Aycock

Often, lab analysts, policemen, and consultants have different perspectives on what might have been important in the processing/handling of a homicide case. Frequently, questions arise along the way that were not evident at the outset. You will see the videotape of a bloody death scene. You are asked to listen to a description of the scene and what took place; and, you are asked to view the tape thinking about the questions you normally consider when confronted with homicide scenes. We will then discuss the case in light of what went wrong, what went right, what we can do better and how can we all work together to do a better, more complete, job.

### **Beating Patterns**

Mike Barnes - Senior Criminalist  
Redding Laboratory, California Department of Justice

Can the relative amount of force be gauged by the characteristics present in a blood transfer pattern? This question was posed in relation to a case involving the possible beating of a victim with a shotgun. An experiment was designed to test the variables of cloth type, weapon type, force, and surface hardness on the transfer pattern. The results of the experiment will be presented along with a few of the facts from the case.

### **Who Shot Whom?**

Sharon L. Ballou  
Forensic Consultant - S.A.J. Forensics

On Friday, October 17, 2003, the bodies of two deceased individuals were discovered in a locked residence in the Sanford area of Seminole County. The causes of death for both victims were single gunshot wounds to the head. The victims, a man and a woman, were last seen (the night before the bodies were discovered) leaving a local bar after a very verbal altercation. Examination of the crime scene revealed that, most likely, the two victims were the only persons in the house at the time of the incident. The question then became ... Who shot whom? A reconstruction of the crime scene using trajectories, bloodstains and an overall evaluation of the scene itself provided an answer to the question and controversy between the crime scene analysis and the findings of the Medical Examiner.

### **The Midwest Forensics Resource Center - An Overview**

David P. Baldwin  
Director  
Midwest Forensics Resource Center  
Ames, Iowa

The Midwest Forensics Resource Center (MFRC) is a partnership of Iowa State University and the Ames Laboratory with publicly-funded crime laboratories in the upper Midwest. Operating under funding from the National Institute of Justice, the MFRC addresses programs of work in forensic science Casework Assistance, Training, Education, Research, and Technical Innovations in Management and Infrastructure. These programs are advised and reviewed by advisory groups made up of personnel from our partner laboratories in Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin. Dr. Baldwin will present an overview of the MFRC and these programs. He will also discuss a new initiative at the MFRC addressing the availability and uniformity of training and presentation aids for bloodstain pattern analysis. This initiative is being undertaken with involvement by personnel from the Des Moines Police Department, the Kansas Bureau of Investigation, the Minnesota Bureau of Criminal Apprehension, West Virginia University, and the National Forensic Science Technology Center.

## **How BPA Assisted in the Identification of Other Crucial Evidence Types**

Gillian Leak

Senior Reporting Officer, Forensic Science Service

This presentation relates to a scene where the outer cordon encompassed many acres of land. Snowfall had occurred and the wind temperature was -7! Door to door enquiries were hampered by the timing of the offence, around midnight going into a New Year. Many of the local premises were holiday caravans that were occupied temporarily over the holiday period before their occupants returned home.

Mr. Jones was subjected to a sustained assault where substantial blood was lost. His trousers (and possibly his underpants - never recovered) had been removed by someone at some stage in the incident. He had died as a result of the severe assault that included stamping. Some of the blood present on his body, around his genital region, had been partially 'washed' away. Initially this was thought to possibly be the victim's own semen or urine. However, later tests confirmed that semen from another man was present. Chemical treatment of the scene, initially carried out to aid identification of some of the finer blood patterns, revealed a partial fingerprint (with insufficient detail to search the fingerprint database).

After searching the UK National DNA Database, the police were provided with a hit detailing a young male whose only previous crime was a minor shoplifting offence. The partial fingerprint at the scene matched one of his little fingers. Blood from the deceased was later found on one of his washed trainers.

Initially pleading not guilty, the case went for trial. On the first day of the trial he changed his plea to guilty. The judge ordered psychiatric reports to be carried out on the defendant before sentencing him. At the Newton (pre-sentencing) hearing I was asked to explain to the court the full findings relating to the BPA evidence, explaining what I believed had happened in the different areas of the scene and why I had come to that conclusion. I was the only person asked to give evidence other than the two psychiatrists. Initially the defendant was sentenced to life; however, this was later reduced when the court realized that he was only 17 when he committed the crime, therefore a juvenile at the time. This crime carries a lesser sentence when committed by a juvenile. He turned 18 two weeks after the offence.

## **Creating Luminol Photographs with Digital Imaging**

Sergeant Gord Lefebvre

One of the biggest problems encountered when photographing Luminol reactions is getting just the right amount of light in the photograph to help position the area of interest but not getting so much light that the intensity of the reaction is lost. I have found a very simple method using digital imaging. The scene and reaction are photographed with a digital camera and the digital images are brought into Adobe® Photoshop® where a composite image is created. By combining the two images a type of double exposure is created. We can adjust the opacity of one of the images so that the details in the other image can appear. This composite image may better assist the court or investigators in understanding the relationship of the reaction to its surroundings.

## **Three-Dimensional Representation of Bloodstain Pattern Analysis**

Detective Kevin Maloney  
Ottawa Police Service

As part of a bloodstain pattern analysis course delivered at the Canadian Police College by the Royal Canadian Mounted Police, a mock crime scene bloodstain pattern was analyzed by computer, and the results were rendered in three-dimensions for court presentation. The data from the BackTrack program used on the course were successfully integrated into a standard AutoCAD program in order to show the virtual flight paths of droplets of blood in a three-dimensional depiction. This presentation will illustrate how the virtual strings from BackTrack were incorporated into the CAD program, and will demonstrate how this technique was used in some casework examples.

### **Bloody Fingerprint: *Fresh Blood or Not?***

Peter D. Barnett D-ABC  
Forensic Science Associates  
Richmond, California.

The victim of a fatal assault received serious injuries resulting in significant loss of blood. The defendant admitted coming to the scene and finding the deceased victim, his roommate. Investigation of the scene resulted in the location of a bloody fingerprint on a shelf in the room in which the murder occurred. The fingerprint was identified as the defendant's. The defendant claimed to have left the bloody fingerprint when he returned to the scene to recover some of his property from the room several hours after he initially discovered the victim. He claimed that the bloody fingerprint was left when he returned to the scene, not at the time he initially found the body, and not at the time, some time earlier, when the victim was assaulted.

A crime scene investigation, by a trained blood spatter analyst, resulted in testimony, by that analyst, that the defendant's fingerprint could not have been deposited as claimed by the defendant, but must have been deposited at the time the victim was killed.

In post conviction review of the case, it became apparent that the police investigator had solved the wrong problem – the problem was not whether the fingerprint was made with wet blood or not, but whether the wet blood could have been obtained when the defendant revisited the scene, or only earlier. The basis for the opinion as offered by the investigator at the original trial will be reviewed, and an alternative opinion suggested.

### **A Halloween Homicide**

Deborah Harris  
Crime Scene Investigator, San Bernardino County Sheriff's Department

On Halloween Eve, moving lights are reported in a vacant house. Upon investigation a broken window is found and a transient is inside taking a shower. He is arrested for breaking and entering, trespassing, etc. After the transient is removed officers notice numerous dried bloodstains in the dining room of the house. The transient denies any knowledge stating he only took a shower.

Upon closer investigation it is observed that small bloodstains cover every wall, chairs in the room have large soaked-in bloodstains on the seats, several pornographic magazines are scattered on the floor and covered with blood drops. Blood soaked paper towels are located in a kitchen trash can. Faced with the amount of blood in the house investigators are certain someone or something has been killed or severely injured, but who or what?

Blood tests confirmed that the blood is human. An extensive search of the immediate area did not locate a body. No missing persons had been reported. Can bloodstain patterns give any clues? The answer is a surprise...

## **Terror In The Woods : The Deaths of Charles & Shirley Chick**

Iris Dalley

Crime Scene Agent – Oklahoma State Bureau of Investigation  
Eastern Regional Office

Bloodstain patterns often yield information about who, what, where, and how of violent occurrences. The ‘why’ is carried in the heart and mind of the perpetrator, and usually is not revealed in the physical evidence at the scene. But sometimes, the bloodstain patterns, along with other physical evidence, give the investigator a glimpse of the ‘why’. On a warm July afternoon, a lone motorcyclist was enjoying the beauty of the Kiamichi Mountains when he stopped to nap on a picnic table in a camping area. He saw a woman napping in the midday shade in a nearby campsite. When the cyclist awoke from his nap, he noticed that the woman had not moved. Neither had her husband. Fibers in the scene directed the investigation of ‘who’; blood confirmed the identity; and, stain patterns told the ‘how’ that also led to the ‘why’.

## **The Bloodstains That Didn’t Seem to Fit**

Kim Duddy

Washington State Patrol Crime Laboratory

Sometime during the evening to early morning hours of December 19, 1997, Jack Pearson was shot dead in the main floor of his residence on Camano Island, Washington. The authorities were called to the scene reportedly right after the shooting incident. The ‘911’ call was made by the live-in girlfriend of the deceased. It was reported that the girlfriend was upstairs and heard a noise(s) from downstairs. She reported seeing a masked man running from the house and then found the fully clothed body of Mr. Pearson dead in the hallway.

There were numerous bloodstain patterns throughout several rooms of the main floor of the residence as well as other related physical evidence. Initially there were some inconsistencies with the story from the girlfriend, the autopsy results, and evidence at the scene. The agency requested a bloodstain pattern interpretation and crime scene reconstruction to assist in determining what occurred during those early hours of December 19. An interpretation and probable sequence of events will be presented.

## **The Effects of Anticoagulative Treatment on BPA**

Silke M.C. Brodbeck, MD

Frankfurt, Germany

Liver dysfunction and other medical conditions may cause changes in the blood’s coagulation capability. Sometimes the same effects are used in medical treatment to prevent vessel closures after myocardial (heart) infarction and strokes. For that reason substances like ASA, Clopidogrel and Phenprocoumon are used to prevent these medical conditions. But, how do they change BPA? Do they have an effect on BPA and what is it? In this presentation a short overview of the human coagulation system is given and the results of an experimental study will be presented in combination with a case presentation.

## **Bloodstain Patterns Related to Clothing in Two Homicides**

Edward G. Bernstine

Ph.D., D-ABC

Massachusetts State Police Crime Laboratory

The theme of this presentation is the potential importance of apparently peripheral items to crime scene reconstruction and evidence discovery. In both cases to be presented, bloodstained items recovered from crime scenes yielded

additional evidence that was not predictable from a cursory inspection of the scenes. The location and bloodstained condition of a shirt found at a scene of a fatal beating contributed to understanding the circumstances of this crime. Bloodstain patterns and wearer-DNA on a shirt found at the scene of a fatal stabbing provided important information about a particularly brutal crime. In this same scene, imprints made by the victim's shirt added detail to the reconstruction of the crime. Important associative fiber evidence was found on a knife sheath left at the scene. In addition to discussion of the clothing, the presentation will include partial reconstruction of both crimes.

## **Collecting Blood in the Barrel of a Firearm**

Martin Eversdijk

This is a presentation is about a new research project the Dutch police are working on. Bloodstains in a gun cannot only be used for DNA investigation; but, also for determining the discharge distance between the firearm and the blood source. Collecting the bloodstains positioned in a barrel has always been a big problem. Since there is a new casting material called forensic sil, collecting bloodstains in a barrel is very easy. In this presentation you will see our procedure for collecting bloodstains from the barrel of a gun.

## **Applying Luminol Once is Good; Twice is Better**

Martin Eversdijk

In 1996 two Dutch forensic detectives, Rene Gelderman and myself, Martin Eversdijk, started investigating luminol after seeing a program about the substance on the Discovery Channel. Our research mainly focused on two points: (1) Finding a luminol solution which will only cause minimal destruction on the DNA, and (2) making luminol easy to use during investigation. In co-operation with the Dutch National Forensic Laboratory (NFI) a composition was created which minimally affected DNA. In addition, a spraying method was found that allows for precise application of luminol, regardless the surface. This is important because the amount of luminol applied on a surface is just as essential for DNA recovery as the luminol solution itself. This "DNA-friendly" solution made in cooperation with the NFI had some disadvantages concerning photographing the luminol reaction. For two years now the Dutch police (first case done by the police force of Midden-West Brabant) have been using two different kinds of luminol solution: One with a low detection rate: 1: 150.000, but which will minimally damage the DNA and, the second to be sprayed after sampling, called "Reconstruction Luminol" The latter has a far better detection rate and is far better for photographing the luminol reaction.

For over a year most of the luminol pictures taken by the police have been digital and have been improved with digital imaging. This is an excellent method of capturing the luminol reaction, provided there is enough knowledge of photography. In this presentation the digitally improved technique will be compared with the other four known techniques.

## **Spit, Splat or Spurt? A Reconstruction**

George Levine

Senior Criminalist

Santa Barbara Laboratory, California Department of Justice

Corroborating other evidence, blood pattern analysis was used to refute the defendant's version of events. An unusual pattern unlike others was observed on the victim's leg and efforts were made to duplicate it. An EFD Fluid Dispenser, adjustable for pressure and pulse duration, was used to approximate the pattern, which helped to determine the victim's location and position at the time the pistol was fired.

## **Role Definition and Teamwork in Crime Scene Reconstruction**

Dr. Peter De Forest

Professor of Criminalistics

John Jay College of Criminal Justice, City University of New York

Crime scene reconstruction is an essential tool in many criminal investigations where relevant physical evidence is present and recognized. A major component of crime scene reconstruction is bloodstain pattern recognition and interpretation. There is a serious risk of this essential tool being discredited as a result of errors, misconceptions, and abuse. Witness what has been happening in recent years with challenges to fingerprints and toolmarks.

Bloodstain pattern recognition and interpretation and its parent activity, crime scene reconstruction are activities that are far more complex than they may appear on the surface. Done properly, the work is extraordinarily demanding and challenging. I know of no more difficult area of human endeavor.

It is instructive to think of crime scenes as being recording mediums and individual items of physical evidence as being elements of the record produced. This record is the result of alterations of the environment proximal to an event or events that take place in the course of committing a crime. It is often a complex record. The effects of the human initiated events that produce the record do so through the medium of natural laws governing the interactions of energy and matter. A profound understanding of these natural laws is necessary for properly decoding the record.

Analogies, despite their inherent shortcomings, are sometimes very useful. Of course, one has to guard against taking them too far. I am going to use one borrowed from the health arena to help illustrate the need for role definition and teamwork between investigators and forensic scientists in crime scene reconstruction. This is the relationship between emergency medical technicians (EMTs) and physicians. To an outside observer, the roles seem well defined and "turf" issues don't seem to exist. Personnel from both groups work as a team. The EMTs are no less important than the physicians in the overall goal of saving lives.

Crime scene investigation teamwork between investigator and scientist in some jurisdictions is thwarted by default on the part of forensic science laboratory systems. Many laboratory scientists are content to remain in their "ivory towers" and to analyze what is brought to them. They are ignorant of crime scene work and would be of little value at a crime scene in the rare event that they were called to attend one. Many laboratory administrators do not view the crime scene as a problem that should draw on laboratory personnel resources. The problem needs to be addressed on a broad range of fronts. Case examples will be used.





**Jeff Scozzafava delivers his case presentation**



**Conference coordinator Charlene Maria introduces speaker**



**Gillian Leak presents her case from the UK**



**Johnny Aycock addresses the conference group**



**Dr. Peter De Forest discusses aspects of crime scene reconstruction**



**Kevin Maloney presents a new technique for three dimensional representation of bloodstain pattern analysis**



**Martin Eversdijk discusses luminol procedures**



**Iris Dalley with Certificate of Appreciation for her presentation**

**MINUTES OF THE INTERNATIONAL ASSOCIATION OF BLOODSTAIN PATTERN  
ANALYSTS ANNUAL BUSINESS MEETING, SANTA BARBARA, CALIFORNIA  
OCTOBER 7<sup>TH</sup> 2005**

**OFFICERS IN ATTENDANCE:**

Bill Basso, President  
Pam Bordner, Vice President Region I  
John Frederick, Vice President Region II  
Iris Dalley, Vice President Region III  
LeeAnn Singley, Vice President Region IV  
Leif Petersen, Vice President Region V  
Norman Reeves, Secretary Treasurer  
Brian Kennedy, Sergeant at Arms

**7 October 2005**

President Basso projected the meeting agenda on a screen and requested any additions to the agenda be made at this time and none were made. A quorum of members was present at the meeting. President Basso called the business meeting to order at 1:45PM.

President Basso asked for any additions to the agenda posted in the hospitality room and there were none. Johnny Aycock made a motion to accept the agenda and Kim Duddy seconded the motion. The motion was approved.

President Basso called for a motion to advance the applicants listed in the hospitality room list from applicant to provisional. A motion to advance the applicants listed to provisional member was made by Tom Griffin and seconded by Bruce Wiley. The motion was approved.

President Basso indicated the list of provisional members which was located in the hospitality suite be advanced to full membership. These provisional members submitted the required request for promotion during the year. Craig Stewart made the motion to accept those listed for full membership and Kim Duddy seconded the motion. The motion was approved.

Minutes of the 2004 Conference Business Meeting had been published in the December issue of the newsletter and a copy was available at the 2005 Conference. Motion made by Joe Slemko to accept the minutes as published. Second by Rex Plant. The motion was approved.

**2006 MEETING PROPOSALS:**

President Basso announced that a videotape had been received from Herb MacDonell with a proposal to host the 2006 Conference in Corning, New York. Johnnie Aycock asked that IABPA consider MacDonell's proposal out of respect for him and what he has done for IABPA. Stuart James stated that MacDonell has been instrumental in James' and others careers, having taught the first course in Elmira and being a charter member in 1983. MacDonell also sent a brochure, which President Basso read to the meeting. President Basso then played MacDonell's videotape. The videotape was in two segments. The first segment was a speech by MacDonell, and the second segment was a tour of places of interest in Corning. Brian Kennedy said the IABPA Conference was last held in Corning in 1985.

President Basso announced that two sites have been proposed for the 2006 Conference, those being Atlantic City, New Jersey, and Corning, New York. Discussion was held on the possibility of

selecting both sites for consecutive years 2006 and 2007, availability of either site for 2007, the possibility of honoring MacDonell at a conference in Atlantic City, and the known costs cited in the Atlantic City proposal and lack of specifics offered in the Corning proposal. Brian Kennedy made a motion to select the 2006 Conference site which was seconded by Larry Renner. The majority voted for Corning, New York following two vote counts.

A discussion was had regarding proxy votes which were filed for the conference vote and it was decided, since no public announcement was made that proxy voting was an option to discount the existing proxy votes.

#### **MEMBERSHIP COMMITTEE REPORT:**

Norman Reeves reported less membership applications this year compared to prior years, and that the Vice Presidents had completed all the reviews before the conference. Current mailings are about 750, including applicants, provisional members, full members, and associate members.

#### **VICE PRESIDENTS REPORTS:**

##### **Region I**

Pam Bordner reported 18 applications for provisional membership and 8 applications for promotion.

##### **Region II**

John Frederick stated that he had no report.

##### **Region III**

Iris Dalley indicated that she had no report.

##### **Region IV**

LeeAnn Singley reported 43 total applications processed, including new applicants and applications for promotion to full membership, and that she hopes everyone will come to the east coast and support the Corning conference.

##### **Region V**

Leif Peterson reported that he has the largest region, which includes many countries. He processed 23 applications.

##### **Region VI**

No Vice President for this region in 2005.

#### **TREASURER REPORT:**

The treasurer's report was posted in the hospitality area for review by the membership. Norman Reeves reported that, as of September 27, the IABPA had \$86,073. The average yearly expenses are about \$47,000. IABPA needs to maintain a balance of about double the yearly expenses, to maintain funds for emergencies and for the purchase of equipment. In the near future, IABPA may purchase equipment or services to archive records. Norm Reeves produced a graphic

chart which indicated the IABPA had been stable until 5 or 6 years ago when there was a deep plunge in funds, but IABPA has recovered and exceeded previous net worth's and is currently in very good financial condition. Discussion was held on the feasibility and on the pros and cons of publishing the newsletter on the IABPA website and availability to the public. Webmaster Joseph Slemko advised that he has placed the last 5 years of the newsletter on the website. Those are downloadable as PDF files.

## **COMMITTEE REPORTS:**

### **Daubert Committee**

Tom Bevel indicates there is nothing to report.

### **Ethics Committee**

Bart Epstein indicated said the committee had discussions last year, but had nothing to report.

### **Proficiency Test Committee**

Pam Bordner received about 70 responses (out of a possible 700) to the proficiency test survey. The results of that survey had been published in the newsletter. The CST test is a relatively good test. She hopes to bring samples to the next conference. Discussion was held about the possibility of IABPA producing a test. The Board of Directors has previously discussed the logistics of this issue, which would include making the test, grading the tests, and keeping accurate records. Some people are interested in obtaining technical or peer reviews. Setting up a review program is a slow process. Pam Bordner asked that anyone interested contact a member of the committee.

Tom Griffin said that, based on a prior survey, that the IABPA did not have sufficient resources to embark on a certification program, but the issue may be re-addressed. Brian Kennedy said that the Board had deep concerns about the purpose of certification versus the liability of the association as a certifying body.

### **Education Committee**

No report was presented.

### **Editor's Report**

Stuart James commented that he had put new articles and ideas into the newsletter. He asked that people doing training send information about upcoming events to publish. Advertisers have renewed, including Blue Star buying 2 pages of advertisement. The costs of mailings continue to increase, complicated by returns for bad addresses. James asked that members keep their addresses up-to-date by contacting Norm Reeves who maintains the database.

## **Legal Representative**

No Report

## **Historian's Report**

No Report

## **Sergeant at Arms**

Brian Kennedy complimented the professionalism of the group.

## **OLD BUSINESS**

President Basso reported that the Board is working on a research grant to be offered in memory to Dan Rahn, but progress is slow. The Board hopes to have the grant ready by the end of this year. President Basso said the latest issue of the newsletter published proposed By-Laws changes. President Basso projected those changes on the screen and summarized each change. A motion was made by Lisa DiMeo to accept the revised By-Laws as published. Seconded by Rex Plant. The motion was approved.

## **NEW BUSINESS**

President Basso made a request for a host for the 2007 conference in the central time zone. Tom Griffin offered the possibility of a 2008 conference in the Denver area (mountain time zone). This would make the third time for the IABPA conference to be held in the Denver area. Tom Griffin will bring a proposal to the 2006 conference. LeeAnn Singley commented on the map of attendees which Charlene Marie had on the wall.

President Basso said that he had initially told the Board that he intended to step down as President, but thru discussions was encouraged & requested to stay one more year, and he has accepted that request.

Mark Reynolds had an article in the last newsletter describing developments in Region VI and proposing that the IABPA send a member to the National Institute of Forensic Science seminar on Critical Issues which is to be held in February 2006. A letter was received from the Institute indicating expenses for the visiting IABPA member would be paid, except airfare. The Board decided to take advantage of this opportunity, but has not notified of who will be sent.

## **NOMINATION COMMITTEE REPORT**

The Board recommends the same slate of 2005 officers to continue on the Board for 2006. The Board also recommends Mark Reynolds as Region VI vice-president. President Basso announced that the Board will accept nominations for all Board positions, each being a 1-year term. Pat Laternus nominated Craig Stewart for President. Craig Stewart accepted that nomination. President Basso called for nominations for each region. There were none. Motion was made by Bruce Wiley to close nominations. Joe Slemko seconded the motion. The motion was approved. Andre Hendrix

announced that the IABPA President and Treasurer have been invited to attend the European conference, without expense to the IABPA.

## **ADJOURNMENT**

Motion by Norman Reeves to adjourn. Todd Thorne seconded the motion. The motion was approved at 3:20PM.



**President Bill Basso addresses the IABPA Annual Business Meeting**

# 2006 INTERNATIONAL ASSOCIATION OF BLOODSTAIN PATTERN ANALYSTS ANNUAL TRAINING CONFERENCE

Corning, New York

Hosted by Herbert Leon MacDonell

OCTOBER 18-19-20 2005  
WEDNESDAY-THURSDAY-FRIDAY

*If you plan to attend, please e-mail Herb at [forensiclaboratory@stny.rr.com](mailto:forensiclaboratory@stny.rr.com)  
with a "yes" in the subject line. It will help with conference planning.*

*Register early & plan on presenting!*



Members of the First Advanced Class in Bloodstain Pattern Analysis held in Corning, New York in 1983 which was the birth of the IABPA. The Charter members of IABPA are: top row standing left to right, Ron Linhart, Joe Dean, Sam Johnson, Bob Przygoda, Harry Holmes, Cas Smerecki, Norman Reeves, Bob Young, Mike Johnson, Hal Sharp, Bob Fitzer, Dan Qyealy, Doug Ridolfi (did not join), Stuart James, Charles Edel. Bottom row seated left to right, Sara Moore, Debbie Wakida, Tom Bevel, Jim Rossi, Don Schuessler, Anita Wonder, Herbert MacDonell (instructor). Rod Englert (not present) for this photograph taken November 18<sup>th</sup>, 1983.

# BLOODSTAIN PATTERN ANALYSIS IN THE NEWS

Alexei Pace

[www.info@bloodstain-forensics.com](http://www.info@bloodstain-forensics.com)

Presented below are news articles that feature bloodstain pattern analysis. Links are active at the time of writing (mid-November 2005), however they may be put offline after a few weeks. These news items are distributed through the 'BPA in the News' mailing list, which counts 130 members and to which one may subscribe to by e-mailing me at [ap@onvol.net](mailto:ap@onvol.net). All details shown are available in the public domain and were acquired through online press websites.

## **Judge disallows some autopsy photos**

HOUSTON Home Journal

<http://news.mywebpal.com/partners/963/public/news661883.html>

Court martial of Senior Airman Andrew Paul Witt, charged with stabbing a Robins Air Force Base couple to death. "During evidence testimony, Paul Kish, a blood-spatter analyst said the blood stain on Jamie Schliepsiek's skirt shows she was wearing it when she was stabbed in the lower back as there is far less blood and a stain only on the back near the top of the skirt that dripped down, showing she was bleeding while standing and wearing it. The autopsy photo in question shows her corpse covered in blood, not wearing the skirt."

---

## **Blood expert testifies in Hansen murder trial**

Rockford Register Star - Rockford, IL, USA

<http://www.rstar.com/apps/pbcs.dll/article?AID=/20050927/NEWS/50927009>

Report gives some details about the testimony of Loves Park Police Technical Services Director Howard Dean, who was introduced as an expert witness in "spatter analyzation" (direct quote!), in the trial of George Hansen, accused of bludgeoning his business partner Mary Ann Clibbery to death with a hammer. Dean said Clibbery was likely hit at least four times in the head with an object - two times when she was standing up and twice more when she was on the ground. "Could there have been more?" Prosecutor Margie O'Connor asked. "Yes," Dean replied. "That's the minimum though?" "Yes," Dean said.

---

## **Spaulding trial ends first week**

Guymon Daily Herald - Guymon, OK, USA

<http://www.gdherald.com/articles/2005/10/06/news/news01.txt>

Murder trial of Jackie Spaulding, accused of conspiring with her son, Calvin Hudson to cause the death of her husband Roger. Oklahoma State Bureau of Investigation criminalist J. Douglas Perkins took the witness stand and testified that the head of the individual that left the bloody marks on the fridge was more that a foot and a half above the floor of the shed and some distance away from the door as determined by spatter patterns. Perkins said the victim was probably not standing upright at the time of the blood spatters and the person forming the blood pool was probably not alive when the pool formed. He reemphasized his belief two people had been involved in the moving of the body. Defence attorney J. Loepp asked if Perkins had ever attempted to pack dead weight, offering a dead deer as an example. Loepp asked if it would be possible for one person to move Roger's six-foot 95kg body without assistance. Perkins conceded it was

possible but due to the spatter patterns the person would have had to keep Roger's head in an upright position more consistent with two people having been involved in moving the body.

---

### **Ferguson denies killing Heitholt**

Columbia Missourian - Columbia, MO, USA

<http://columbiamissourian.com/news/story.php?ID=16618> and

<http://columbiamissourian.com/news/story.php?ID=16655>

Testimony of Detective Jeff Nichols, in the trial of Ryan Ferguson, charged with first-degree murder and second-degree robbery in the Daily Tribune sports editor Kent Heitholt's slaying. The trajectory of the blood, Nichols said, suggested that the victim was standing on the driver's side of the car with the door open. The unique stain pattern near the gas cap, he said, suggested a cast-off stain, which is a spatter of blood transferred from a weapon to a surface. The blow to Heitholt's head likely came from a downward motion with some kind of blunt object, he said. The defence's forensic scientist, Ronald Singer, however disagreed with the Nichols' analysis of the blood spatter pattern above the driver's side rear tire. Singer said a cast-off pattern cannot be caused by a downward motion — only by the recoil of a weapon that is already covered with blood.

---

## **ABSTRACTS OF RECENT BPA RELATED ARTICLES PUBLISHED IN THE SCIENTIFIC LITERATURE**

Basso, W. Review of Principles of Bloodstain Pattern Analysis: Theory and Practice by James, S, Kish, P. and Sutton, P. Journal of the Canadian Society of Forensic Science, Vol. 38, No. 3, pp.179-180, September 2005.

### *Abstract*

A comprehensive review of the text, Principles of Bloodstain Pattern Analysis: Theory and Practice published by Taylor & Francis Group, Boca Raton, Florida.

Martin, L., Cahill, C., Recovery of DNA from Latent Blood after Identification by Fluorescein, Journal of Forensic Identification, Vol. 54, No. 6, 2004

### *Abstract:*

Luminol has been widely used in the field of crime scene investigations to detect latent blood; however, luminol has the tendency to destroy DNA evidence. Fluorescein, an alternative to luminol for detecting latent blood at a crime scene, does not destroy DNA evidence. This paper demonstrates the successful recovery of DNA from a blood sample treated with fluorescein. DNA was extracted from blood-containing denim substrates after fluorescein was applied to the substrates. The DNA locus, D18S51, was amplified using standard polymerase chain reaction (PCR) techniques, analyzed by electrophoresis, and used to demonstrate that DNA was successfully recovered from the samples.

Perkins, M., The Application of Infrared Photography in Bloodstain Pattern Documentation of Clothing, Journal of Forensic Identification, Vol. 55, No. 1, 2005

### *Abstract:*

The observation of bloodstain patterns on clothing can be crucial to an accurate reconstruction of events related to the bloodshed. Chemical enhancement techniques, such as amido black and leucocrystal violet, can be successful, but can alter the appearance of stains and may hinder DNA analysis. The advantage of photographic techniques is their non-invasive effect on appearance and biological integrity. Conventional photographic techniques, such as subtractive or additive color filtration, are successful with lighter colored materials but are ineffective on dark fabrics. Nonconventional photography techniques can be utilized to increase the contrast in the appearance of blood against some types of backgrounds. Infrared photography is one of these techniques and should be considered for specific case situations.

Racette, S., and Sauvageau, A., Unusual Sudden Death – *Two Case Reports of Hemorrhage by Rupture of Varicose Veins*: American Journal of Forensic Medicine and Pathology, Vol. 26, No. 3, pp. 294-296, September 2005.

*Abstract*

Although varicose veins are frequent, they are rarely considered lethal. Still, rupture of a varicosity can result in significant and even fatal hemorrhage. External hemorrhage is an unusual complication of this common venous pathology. Reported here are 2 cases of severe external hemorrhage resulting from the perforation of a varicose vein.

Yapping, L. and Yue, W., Bloody Latent Fingerprint Detection using LeuR6G, Journal of Forensic Identification, Vol. 54, No. 5, 2004

*Abstract:*

This research, which tested varying levels of blood-contaminated fingerprint marks on different surfaces, revealed that leucorhodamine 6G aids blood-contaminated latent print visualization. The results were better on smooth surfaces than on rough surfaces. The age of the blood prints (tested to four weeks) was not a factor in the ability to visualize the prints.

## 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 2006 please contact Norman Reeves.**

# Training Opportunities

**January 23-27, 2006**  
**Advanced Practical Homicide  
Investigations**

**Seminole County Sheriff's Office  
Altamonte Springs, Florida**

Contact: Andrew Watts  
Tel: 407-665-6973  
E-mail: [awatts@seminolesheriff.org](mailto:awatts@seminolesheriff.org)  
Registration: [www.seminolesheriff.org](http://www.seminolesheriff.org)



**February 6-10, 2006**  
**Bloodstain Pattern Analysis Workshop**

**Miami-Dade Police Department  
Specialized Training Department  
Miami, Florida**

Contact: Toby L. Wolson, M.S.  
Miami-Dade Police Department  
Crime Laboratory Bureau  
Forensic Biology Section  
9105 NW 25<sup>th</sup> Street  
Miami, Florida, 33172  
Tel: 305-471-3041  
E-mail: [twolson@mdpd.com](mailto:twolson@mdpd.com)



**April 24-28, 2006**  
**Bloodstain Pattern Recognition Course**

**Northwest Bloodstain Pattern Association  
Edmonton, Alberta, Canada**

Course Coordinator: S/Sgt. John Forsythe RCMP  
E-mail: [jon.forsythe@rcmp-grc.gc.ca](mailto:jon.forsythe@rcmp-grc.gc.ca)



**October 23-27, 2006**  
**Bloodstain Pattern Recognition Course**

**Northwest Bloodstain Pattern Association  
Edmonton, Alberta, Canada**

Course Coordinator: S/Sgt. John Forsythe RCMP  
E-mail: [jon.forsythe@rcmp-grc.gc.ca](mailto:jon.forsythe@rcmp-grc.gc.ca)



**December 4-8, 2006**  
**Bloodstain Pattern Analysis Workshop**

**Miami-Dade Police Department  
Specialized Training Department  
Miami, Florida**

Contact: Toby L. Wolson, M.S.  
Miami-Dade Police Department  
Crime Laboratory Bureau  
Forensic Biology Section  
9105 NW 25<sup>th</sup> Street  
Miami, Florida, 33172  
Tel: 305-471-3041  
E-mail: [twolson@mdpd.com](mailto:twolson@mdpd.com)



*Training Announcements for the  
March 2006 IABPA News must be  
received before February 15, 2006*

## Editor's Corner

This issue of the NEWS completes my second year as Editor and I have been pleased with the positive comments received for the format and content. This issue was compiled under somewhat unusual circumstances. First, Hurricane Wilma caused an extended power loss in South Florida. This was followed by a six day trip to Kotzebue, Alaska for a trial. Lisa DiMeo, also a witness in that trial and an Associate Editor and I worked on some final editing issues in the frozen tundra of Northern Alaska. I extend my appreciation to all the Associate Editors who have assisted me in with the editing of submitted articles and the structure of the issues during the past two years. Norman Reeves presented Danny Nowlin of Nowlin Printing with an IABPA plaque for his excellent job with the printing and distribution of the NEWS.

There is a preliminary announcement in this issue for the 2006 IABPA Annual Conference to be held in Corning, NY and hosted by Herbert Leon MacDonell. More detailed information will appear in the March issue of the NEWS. As many of you are aware, Corning, New York was organized in 1983 by members of the first Advanced Bloodstain Institute organized by Herb. Several of that group are still active in IABPA as you may recognize them in the 1983 class photograph on page 37 of this issue. If a member knows the location of any of the 1983 group that are perhaps currently inactive please contact Herb at [forensiclab@stny.rr.com](mailto:forensiclab@stny.rr.com) so that he can invite them for a reunion at the 2006 IABPA Conference in Corning, New York, October 18-19-20..

Stuart H. James  
Editor-IABPA NEWS  
James & Associates Forensic Consultants Inc.  
4800 SW 64<sup>th</sup> Avenue, Suite 105  
Fort Lauderdale, FL 33314

Tel: 954-321-8700  
954-485-5904

Fax: 954-321-8994

E-mail: [jamesforen@aol.com](mailto:jamesforen@aol.com)

## Past Presidents of the IABPA

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

## Associate Editors of the IABPA News

**Fons Chafe**  
**L. Allyn DiMeo**  
**Barton P. Epstein**  
**Paul E. Kish**  
**Jon J. Nordby**  
**Joseph Slemko**  
**Robert P. Spalding**  
**T. Paulette Sutton**

The IABPA News is published quarterly in March, June, September, and December. © 2005 The International Association of Bloodstain Pattern Analysts. All rights are reserved. Reproduction in whole or in part without written permission is prohibited.