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President’s Message

Several years ago I was in an IABPA business meeting when a Vice-President announced that he could not continue his service. Since no one else jumped up to scream and holler for the position, I got it! And so it began. I was blessed with the honor of serving as both Regional Vice-President and as President. I have learned much during these past few years, not the least of which is that there is ‘room at the top’ for everyone. With about 900 members worldwide obviously not everyone can fill the few elected positions. But the elected positions are not “The Top”. “The Top” are the members who actively participate by offering input and guidance to other members and officers. “The Top” may be serving on a committee, writing for the newsletter, or just be vocal about the needs and directions for BPA.

IABPA is facing many challenges. Although not recognized in the NAS report, we do have avenues to address issues they raised. The Education Committee presented a proposal for an Advanced Course Outline. A lot of work went into that proposal. Whether or not that proposal is accepted, it has opened discussions on how we can better meet training needs in our evolving discipline. The Ethics Committee has been more active this past year than any time in recent memory. That committee’s work protects our entire discipline. If we do not police ethical violations from within, be assured that we will be judged from without.

The Certification Committee’s work has focused on individual BPA certification. The question we are facing is not whether or not certification will happen, but rather how and by whom it will be administered.

A Website Committee is investigating the possibilities of upgrading our website, especially in the area of a members-only section to improve communication inside IABPA.

A Bylaw Committee is preparing recommendations for changes to the bylaws. The bylaws outline who we are and how we function in IABPA. Get involved! Make suggestions. Speak up for what you do and do not want the IABPA to be!

The 2011 Conference plans are underway. Request the workshops and/or instructors and discussions topics you want at your conference. Offer to host some portion of this conference or plan a future conference.

So as I step aside from the office of President, I am asking you to lend a voice, lend an ear, lend a hand – be involved. This is Our IABPA. And I hope to see you at the top!

Iris Dalley
Bloodstain Pattern Analysis Part 1: Training and Educational Materials

M.B. Illes1, I. Dalley2, P.E. Kish3, M.C. Taylor4 and A.B. Yamashita5

Abstract

There are a limited number of published articles on bloodstain pattern analysis (BPA) training. The documents reviewed highlight a systematic approach to training and educational content. This is reflected in two agency manuals that were reviewed. Detailed educational recommendations from professional bodies are outlined along with a review of training resources.

Résumé

Il y a très peu d’articles publiés traitant de programme de formation pour l’analyse des patrons de taches de sang (BPA). Les documents revus font ressortir une approche systématique d’entraînement et d’éducation. C’est ce qui ressort de la revue de manuels provenant de deux agences. Les recommandations éducationnelles détaillées issues d’associations professionnelles sont présentées avec les ressources de formation.

Introduction

This review on bloodstain pattern analysis training concentrates on training documents available in the public domain as published literature gathered from peer-reviewed forensic journals, newsletters, university technical reports, books, magazines and internet sites. No attempt has been made to systematically review all the in-house agency training programs that exist in many jurisdictions.

An extensive literature search revealed a total of twenty-four articles that had been written between the period of 1977 and 2009, only five of which were from peer-reviewed journals. In addition we review two examples of BPA training manuals which were readily available to the reviewers and for which there were no agency restrictions on their use in a public forum. These were manuals from the Federal Bureau of Investigations (FBI), an agency that has recently withdrawn from BPA training, and the Ontario Police College (OPC). These manuals describe a full understudy program or examiner training program for a new bloodstain pattern analyst (1, 2).

Training recommendations published by the Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN) and the International Association of Bloodstain Pattern Analysts (IABPA) are described, as well as published documents describing resources for BPA training (3, 4).

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Agency Training Programs

The study of BPA requires the combination of theoretical knowledge with hands-on crime scene experience under the direction of a mentor (3). This approach has been successfully used by several organizations (5). In the past, mentorship programs have been conducted with the mentor and candidate coming from different organizations and countries (6).

In 2005 the Western Australia Police Service developed a two-tier approach to BPA training. The first step in this process is a 16-hour BPA awareness course. This training was mandatory for all forensic investigators attached to the crime scene unit and included health and safety, basic pattern recognition, photography, and evidence collection, basic principles of crime scene reconstruction, and case studies (7).

The second step was a BPA Specialist Development Program. This program was only provided to a few individuals who would be completing complicated BPA scene examinations and providing expert testimony in court. This training included a 40-hour basic BPA course, an 18-month understudy, a research project, a written exam, and an oral board examination (7).

BPA workshops and publications have been used to teach specific areas of BPA crime scene documentation and court presentation techniques (8, 9). These feature documentation of bloodstain scenes and stress the importance of the basic BPA training course. Individuals are encouraged to attend basic BPA training [10]. The basic bloodstain course concept has continued to be an effective way of teaching people who are new to the field (9, 10). There are also advanced BPA workshops available that supply information on expert opinion evidence (11).

Although the FBI no longer provides BPA training or analysis their training manual is reviewed here along with that of the OPC (1, 2). The FBI manual was created for internal use while the OPC provides service to a variety of groups, such as police and laboratory personnel. The FBI procedure was specific to their organization and the training candidates were employees from within the laboratory DNA unit. This meant there was internal controlled candidate selection for the program. Conversely, the OPC receives applications for their understudy program from external law enforcement agencies and forensic laboratories. There are many similarities in program requirements between the two manuals. The FBI BPA training manual was developed in 2004. This manual outlined ten training requirements that included technical and administrative aspects of BPA, including casework, moot trials, and competency testing.

The manual described training standards for each of the areas of study and provided learning objectives, procedures, and assessment descriptions. The trainee was required to attend a 40-hour BPA course which is also recommended by the IABPA (4). The FBI required that this course be conducted by their in-house DNA unit. In addition, the trainee was required to attend a non-FBI BPA training workshop or an 80-hour basic Evidence Response Team (ERT) training session. An emphasis was placed on possessing a fundamental knowledge of the underlying math and physics principles as they relate to BPA. The FBI manual stipulated that a trainee must have had successfully completed undergraduate courses in either math and/or physics. The BPA examiner was also required to complete the serology and/or DNA analysis training offered by the FBI (1).

The FBI program manual was used in conjunction with internal standard operating procedures (SOP) that were written specifically for BPA and the DNA unit. By comparison the OPC is a training facility that does not require an operational BPA SOP (2). The FBI program required that a trainee conduct casework under the supervision of a qualified Bloodstain Pattern Analyst and report on a minimum of five BPA cases. The program included several oral examinations and a moot court exercise. The trainee was also required to complete a start-up BPA competency
test. The manual contained training records that kept track of the completion of all components of the program (1).

The OPC bloodstain pattern analyst understudy program lists twelve requirements to successfully complete the program and these include a Basic and an Advanced Bloodstain Course, reviews of relevant case files, analysis of mock scenes, attendance at crime scenes, a written exam, and an oral board. It does not specify academic content for the required courses of study or the understudy program (2). The OPC is a training facility for police officers. Therefore, the focus of the BPA program is on the training of police officers who will be performing the BPA function. In Canada, the majority of BPA cases are handled by sworn officers as opposed to lab personnel. The understudy manual provides a program outline and stipulates the responsibilities of the understudy candidate, the mentor, the police service and the OPC. The majority of this manual describes these responsibilities and requirements for all individuals that are involved in the process (2).

Candidates for the OPC program must be forensic identification officers or work in a laboratory. This program combines both practical and theoretical approaches to training a Bloodstain Pattern Analyst. The basic 40-hour, advanced, and math and physics BPA courses are mandatory within the OPC understudy program. These courses are offered by the OPC. Mock and real crime scene attendance with an assigned mentor is a program requirement. This exposes the candidate to multiple situational crime scene analysis. There is a three-level approach for crime scene examination; however, an exact number of required scenes is not indicated. The manual encourages reading of BPA literature and the review of the mentor’s BPA case files. A literature list is not provided in the manual. The manual indicates that the candidate must have all BPA reports verified, and attend court to observe an experienced bloodstain pattern analyst present expert opinion evidence. The experimentation with blood and the application of blood enhancement chemicals is another requirement of the program. The candidate must successfully complete a final written examination and present a BPA case in a mock trial (2).

Recommendations of Professional Bodies

*International Association of Bloodstain Pattern Analysts (IABPA)*

In 1991 the IABPA Education Committee completed the original work, establishing standards and requirements for a 40-hour basic bloodstain pattern analysis course which were published in the IABPA News [12]. They have been reviewed over time and rewritten to reflect current standards. The IABPA recommended the content of a basic course should cover the topics of recognition of basic stain patterns, area of origin determinations, and correlation of bloodstain pattern analysis with other forensic evidence, and the documentation of patterns. Associated practical exercises and administrative requirements are also outlined (4).

The IABPA does not make recommendations or set standards for other types of training courses such as an advanced BPA course or a math, physics and computer training course. However both training manuals that were reviewed do require advanced, and math and physics training. The OPC manual specifies that an analyst must complete an advanced BPA course at the OPC and a BPA math and physics course (2). There are prerequisites for the FBI and OPC programs that will be discussed further within this paper.
**Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN)**

In 2008 SWGSTAIN recommended guidelines for minimum educational and training requirements for a bloodstain pattern analyst (3). Features of the guidelines include specific pre-training educational requirements and mandatory mentorship for all trainees. The document also outlines the required minimum objectives specific to a training program, and the requirements for competency testing, and continuing education. The document contains a glossary that defines the roles of each participant within the training process.

**Training Resources**

**On-line Resources**

Computer software used to complete bloodstain pattern analysis and assist with bloodstain analyst training was first developed by Dr. Alfred Carter, Forensic Computing of Ottawa (13, 14). The original programs developed in 1989 were named Trajectories and Droplets (15). Dr. Carter developed Droplets with the assistance of the Royal Canadian Mounted Police (RCMP) to teach bloodstain analysts the physical laws that govern blood droplets in motion. At present a more recent advanced program is called Tracks (16). Dr. Carter has developed a website to help explain the physics and math used in bloodstain pattern analysis (17).

In 2008, a research project was completed that compiled over 500 high speed video clips for use by the bloodstain community (18). The researchers developed and assembled video clips that displayed common bloodletting mechanisms such as passive drop impact, blood into blood, impact spatter and cast-off.

**Equipment and Facilities for Training**

Four articles were reviewed on the development of equipment that could be used in BPA training (8, 19-21). A bloodstain pattern generator was developed for the reproduction of gunshot impact patterns. This generator was constructed from a paint ball gun and PVC tubing. It has been used for BPA clothing examination training and the creation of void patterns for case research (19). Other training and court demonstrative aids such as a convergence point model have been presented in a workshop format (8). An arterial pump was created that used peristaltic action for the creation of arterial gush patterns (20). This pump has been successfully used for teaching and demonstration purposes. It can also be used for setting crime scenes and experimental work on arterial gush patterns.

The design of a fully functional bloodstain pattern training facility that can be built within a garage was developed by a group of New Zealand researchers in 2007 (21). This facility could be used for training, casework reconstruction, or research. Because it was designed to fit within an existing functional vehicle examination bay, the walls were required to be removable and the ceilings adjustable. These surfaces can be lined with paper that can be easily disposed of after bloodletting experimentation. This article presents a simple, inexpensive design for a BPA laboratory.
Use of Blood and Its Substitutes for Training

Bloodstain pattern analysis instructors use blood or a blood substitute to provide students with hands-on experience in blood experimentation. Historically, many trainers have used human blood for experimentation exercises. However, most instructors have moved away from the use of human blood, given potential biohazard health and safety issues (22). The development of academic forensic science programs, court presentation issues, and training concerns have created a need for the use of human blood substitutes (22, 23). There has been limited research into the development of a synthetic blood substitute for BPA training.

Animal blood has become a good alternative to the use of human blood. Animal blood can still present some health and safety concerns, however, the risk appears to be low if proper controls and certification are implemented (22, 23). The literature suggests that the chemical and physiological differences between human and bovine, equine, swine, and sheep blood are minimal. Physiological studies concentrated on impact angle calculation, impact spatter comparison, reproducibility, viscosity, and colour comparison (22, 24). These studies concluded that there were no significant differences between animal and human blood. One medical paper provides insight into the comparison viscosity and erythrocyte aggregation of whole blood prior to and after the introduction of a contrast medium to human, pig, and sheep blood (25). This study supports the fact that human blood is similar in viscosity to both pig and sheep blood. The physiological variations between human and animal blood are minimal. Therefore the research articles support the use of animal blood for BPA training experiments and research.

Theatrical blood and synthetic medical blood are not suitable as a blood training medium as the properties of these fluids differ vastly from human and animal blood. Several blood substitutes have been developed and tested at the London Metropolitan University. Some of these substitutes show promise in having the appropriate stain morphology, viscosity, and colour and for use in bloodstain pattern analysis training (23). Formulations for nine synthetic blood compositions are provided in the article. It was found that one formulation, which was composed of water, flour, salt, glycerol, food syrup, and a red dye, was the only synthetic mixture that the author concluded was suitable for BPA training.

Conclusion

Although there are many BPA training programs within the forensic community, few training materials are available within the public domain to assist instructors. Guideline training documents from IABPA and SWGSTAIN are assisting in raising standards and promoting consistency, but there is much that could be done to ensure best practice training methods are widely used. Pressure from the scientific community and the courts will dictate that high level practitioner training and robust academic qualifications will be a requirement for all bloodstain pattern analysts.
Acknowledgements

We would like to acknowledge the contributions and support from the SWGSTAIN membership, the Midwest Forensics Resource Center, notably Dr. David Baldwin, and Trent University, notably Dr. Chris Kyle. Commercial software, material, and organizations are referenced within this paper for the sole purpose of expressing information on BPA training. In no case does this referencing imply an endorsement by the authors and their affiliated institutions or organizations.

References


Exploring the Relationship between Finger/Palm Prints and Blood

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Introduction

The identification of an individual’s fingerprint in the blood of a victim of crime is extremely powerful evidence. However, there’s very little published literature on the various factors that affect the appearance of a fingerprint with the interaction of blood.

One published technical report states that it’s not possible to determine how a fingerprint has interacted with blood just from its appearance. Some fingerprint experts are prepared to comment on how a fingerprint has been formed, while others will only comment on the identification.

From previous experience, authentication of a fingerprint associated with blood should be a joint examination by a fingerprint expert and a forensic scientist. The scientist would consider the interaction and distribution of blood on the surface of the object and the fingerprint expert would look at the interaction of blood with the ridges and furrows of the fingerprint. This paper demonstrates that by analyzing the mark of a fingerprint, the scientist would be able to determine if:

1. The finger was wet with blood when it made contact with the object
2. A clean finger made contact with blood that was already on the object
3. Blood has come into contact with an existing finger mark on the object

There may be other explanations such as combinations of the three above. However, in the author’s experience these are the most common explanations.

Proposition 1

The finger was wet with blood when it made contact with the object.

Occasionally, it can be obvious if a mark has been made by a finger bearing wet blood, but at other times, you have to look for the subtle detail (Figure 1).

![Figure 1. Rolled finger with blood accumulating at one end of the print.](image)
Here, the heavier distribution of the blood is only on one end of the fingerprint, which indicates that this finger has been rolled across the surface with moderate force.

**Proposition 2**

A clean finger made contact with blood that was already on the object.

These types of marks are dependent on the type of object, pressure of the finger and the rate at which the blood dries. Figures 2a and 2b demonstrate how fingerprints are formed when they come into contact with blood at various time intervals. Figure 2b shows that the optimum time for formation of a good mark was around fourteen minutes after the finger came into contact with the wet blood.

![Figure 2a. As the finger lifts from the surface of the fresh wet blood, the blood gathers in the middle of the mark.](image)

![Figure 2b. Optimum time - fourteen minutes.](image)
Proposition 3

Blood has come into contact with an existing finger mark on the object.

These types of marks are less common but can often be considered by the defense counsel in an attempt to reduce the impact of the fingerprint evidence. This is because if the fingerprint was simply from sweat with very little sebaceous material, then there isn’t much interaction with blood. The majority of sweat is water soluble, so it dissolves away when it comes into contact with blood. (Figure 4).

Figure 4. There is no interaction with the blood and the fingerprint in sweat.

However, as the grease content of the fingerprint increases, then there is interaction with the blood (Figures 5 and 6).

Figure 5. Interaction with a greased fingerprint with blood.
The scientist reviews the appearance of the fingerprint under a microscope with the distributions of any other blood on the object to determine a suitable area to sample. The object may be subjected to a sequence of optical, physical and chemical treatments to establish the presence of blood and the proposed means for its formation. Figures 7a and 7b show two hand marks associated with blood. Figure 7a was made by a hand contacting wet blood and 7b was made by a hand bearing wet blood.
Guidance for the Different Appearances with these Mechanisms

It is not always possible to determine whether it is a hand bearing blood or a hand going into wet blood and there is sometimes a combination of events. The following mark was produced with the palm of the hand bearing wet blood (Figure 8).

![Figure 8. Mark produced with the palm of hand bearing wet blood.](image)

The first observation is the distribution of blood is either side of the palm mark as indicated by black elliptical lines. Note also the absence of blood within the central region of the palm mark. The hand has made contact and on lifting the hand from the surface, the blood has pooled, due to the vacuum created. The following image (Figure 9) is a close up of the palm detail, as indicated by the blue circle.

![Figure 9. Close view of palm detail of figure 8.](image)
Note the amount ridge detail in blood is still present under the pooling effect, as indicated by the black circle. This amount of detail would not be expected if the blood was already present and the effect is probably due to the blood drying on the hand prior to contact with the surface.

The following mark was produced with the palm placed into wet blood (Figure 10).

![Figure 10. Mark produced with palm of hand placed into wet blood.](image)

The first observation is the presence of the large pool of blood in the central region, as indicated by the black circle. Note also that the majority of the friction ridge detail is only present on the outer aspects of the blood. There is also the odd satellite of blood forced out by the pressure of the contact, as indicated by the red circle. The following image is a close up of the palm detail as indicated by the blue circle (Figure 11).

![Figure 11. Close view of palm detail from figure 10.](image)
Hardly any friction ridge detail under the pooled area, as indicated by the black circle and blood has flowed to the end with little pooling when the hand has lifted from the surface. Sometimes it not always possible to determine which mechanism is the most likely; however there is additional information with each mark. Both these impressions have been made whilst the blood is wet and there are no obvious signs of clotting/drying, which may assist with the time line for the enquiry.

**Conclusions**

These mechanisms are only part of the process. Not all ridges associated with blood are as apparent, and marks can often be developed during chemical treatments. It’s critical they are independently reviewed in each case to ensure that justice always prevails. The development of such marks associated with blood and the effects on DNA by such chemicals will be explored in a future paper.

**References**


2010 IABPA Annual Training Conference Held in Atlantic City, New Jersey

Jeff Scozzafava, host of the conference welcomes the attendees to Atlantic City, NJ

2010 IABPA Annual Training Conference in Session.
Abstracts of Papers Presented at the Annual IABPA Training Conference in Atlantic City, New Jersey, October 5-8, 2010

Homicides in the Bathroom

Stuart H. James
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Fort Lauderdale, Florida

Abstract:

The bathroom is not an uncommon location for homicide and suicide events to occur with victims often found in the bathtub. The 1960 movie Psycho, directed by Alfred Hitchcock and based upon the crimes of Wisconsin serial killer Ed Gein, starred Anthony Perkins and Janet Leigh. The stabbing murder of Marion Crane (Janet Leigh) by Norman Bates (Anthony Perkins) in the shower was the film’s pivotal scene and one of the most famous scenes in cinema history. This presentation will discuss two cases where bloodshed events occurred in the bathroom and the bloodstain pattern analysis that included the use of Luminol.

Case 1

On the date of August 2nd, 2007 in the evening, Emergency Medical Service personnel responded to a residence in Palm Harbor, Florida. The body of a young nursing student was found in the bathtub in the bathroom that adjoined a bedroom in the residence that she shared with her live-in boyfriend and two other male roommates. She was pronounced dead at the scene. The boyfriend was subsequently arrested and charged with homicide.

Case 2

On the date of November 7th, 2007 at approximately 11:44 AM, Jupiter Police were called to a residence in Jupiter, Florida. They met with a husband who stated that his wife had not returned from walking a dog at this residence. This was the residence of a family who were neighbors of the husband and wife. The son of the neighbors apparently stayed at the residence while the family was out of the country in Beijing, China. According to police reports, the son eventually told the officers that the neighbor’s wife was in an upstairs bedroom. She was found deceased in the upstairs master bedroom closet inside of a blanket-covered trash bin. Subsequent investigation indicated that a major bloodshed event occurred in an upstairs bathroom. The visiting son was arrested and charged with homicide.
The Human Coagulation System in BPA

Dr. Silke Brodbeck
Blutspureninstitut, Germany

Abstract:

Blood is a liquid that stays liquid within the vessel system, but when in comes to a damage of the vessel system is changes to solid consistency. This happens through coagulation. What is the coagulation system? This presentation discusses the basic principles of human blood coagulation and draws the relevance to BPA. Which factors are affecting the coagulation system? How does the analyst handle an experimental approach about coagulation within BPA?

Paris Double Homicide

DeWayne Morris
Illinois State Police

Abstract:

In 2004, CSI DeWayne Morris investigated the death of Amber Quinn and Troy Stewart in a rural area south of Paris, Illinois. CSI Morris presents this case study review while encouraging group participation and application of logic and the scientific method. This case study review will allow the attendee to pictorially walk through the case and make observations based on crime scene reconstruction and bloodstain pattern analysis.
Assessing BPA Use by Location, Department, and Officer Factors

Dr. Gabriele Suboch
Lee County Sheriff’s Office
Fort Myers, Florida

Abstract:

Based on the data from the U.S. Bureau of Justice statistics in 1976, law enforcement investigators solved 79% of all reported homicides, whereas in 2005, only 62% of all reported homicides were solved. The rationale for this study was to examine the utility and benefits of the use of bloodstain pattern analysis (BPA) as a crime solving tool across different geographical locations and investigative departments; to research a relationship between the officer’s age, education and experience as factors in the decision to use bloodstain pattern analysis, and to assess the benefits of BPA when applied to the reconstruction of violent crimes. This quantitative, non-experimental study was based on an electronic survey distributed to 750 participants (population) and answered by 98 participants (sample) from members of law enforcement agencies in Florida. In this study, the use of fingerprint technology was compared to the use of bloodstain pattern analysis based on location (metropolitan versus rural areas) as well as the use of bloodstain pattern analysis based on departments (major crimes investigator vs. Medico-legal death investigators versus forensic investigators). Based on the analyses, a low frequency of usage of BPA (2% metropolitan, 4% rural areas) and a high frequency where BPA was helpful (71% metropolitan, 63% rural areas) was present. Only 1% of Medico-legal death investigators, 1% of major crimes investigators, and 5% of forensic investigators applied BPA. The recommendations for the Florida lawmakers included financial assistance and grants to train and encourage the use of BPA. Colleges with criminal justice programs should offer courses in BPA. Recommendations for future research included the examination of the use of BPA in local, state and federal agencies, record keeping of court cases with BPA, and tracking the worldwide development and resulting advancements of BPA.
Dr. Michael Taylor  
Institute of Environmental Science and Research  
New Zealand

Abstract:

The analysis of bloodstain patterns is used by criminal investigators to draw inferences about the events that gave rise to the formation of the pattern. The understanding of the dynamics of a blood transfer event is critical to the sound interpretation of the resultant bloodstain pattern. A systematic study of the formation of some of the common bloodstain patterns has been accomplished by using a high-speed digital video camera to record blood transfer as it occurred.

In particular, the phenomenon of “backspatter”, which can occur as a result of ballistic impact, has been studied. The discharge of a firearm and the resulting impact of bullets on a blood source were recorded using high-speed digital video imaging. Blood droplets, firearm muzzle gases and ballistic shock waves were visualized using standard reflected light and shadowgraphy imaging techniques. The interaction between shock waves, air currents, muzzle gases and particulate material, emanating from the firearm upon discharge, with back spattered blood will be demonstrated. Implications for experts testifying in court and bloodstain pattern instructors will be discussed.

Dr. Michael Taylor

Abstract:

Essential to solving some of the problems of injury and death is a thorough understanding of the mechanism of wounding and blood spatter. Because of the obvious difficulties of working with human subjects, researchers turn to models to gather data from, in order to build a solid scientific platform on which reliable opinions can be based.

This paper will discuss progress made with two approaches to the modelling problem. The first is the development of a physical model to study ballistic cranial wounding. The initial work has focussed on an animal (pig) model because of the opportunity for validation of the model. Lessons learnt from this and how they can be
used to develop a human head model will be discussed. The second strand of work involves the use of mathematical modelling techniques to simulate wounding and bloodshed. The initial work has concentrated on the modelling of trauma to brain tissue and exploring possible mechanisms for blood backspatter.

**Blood Droplet to Bloodstain: A Transition Process Paradox**

Dr. Mark Reynolds  
Western Australia Police  
Perth, Australia

**Abstract:**

The transition of a blood droplet to a bloodstain upon contact with a planar surface is an eloquent, albeit complicated fluid dynamic process. This presentation describes that transition and provides insight into several of the dominant phases and also discusses the paradox that exists between the theoretical and practical aspects of this transition process.

**Development of a 40-Hour Fabrics BPA Course and an In-House Proficiency Test for Laboratory-Based Practitioners**

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**Abstract:**
Many forensic biology laboratories around Australia examine clothing and weapons collected from crime scenes for the presence of bloodstains and bloodstain patterns. Much of the current BPA training however focuses on the crime scene and source reconstruction aspects of the discipline and for the most part, neglects the complex paradigm presented by fabric and liquid blood interactions. In 2009, Forensic Science, South Australia, in collaboration with Western and South Australian Police developed and delivered a pilot 40-hour Fabrics BPA training course specifically focused on laboratory based practitioners. Twelve months on, three levels of training have been developed that have been designed to align with Australia’s nationally adopted tiers of BPA training and education standards. This presentation details the development of the course, outcomes from the first course and the future for laboratory based practitioners in Australia seeking BPA expertise.

The presentation also describes a recently developed (by Forensic Science SA) in-house laboratory-based BPA proficiency test for practitioners to demonstrate and maintain their proficiency in BPA competencies as required by NATA (ASCLAD equivalent) accreditation. The test is composed of two parts; categorisation of bloodstains on fabric swatches and bloodstain pattern description of more complex stains on clothing items. Born out of necessity due to the irrelevance of the current CTS BPA proficiency test to laboratory based practitioners, the method and logistics of developing this test, its potential for wider distribution and the outcomes for individual participants will be discussed.

**Abstract:**

Infrared (IR) digital imaging, Ultra-Violet Digital Imaging (UV), Reflected Ultra Violet Digital Imaging (RUVIS), and Hemascein (a fluorescein based material) are applications for locating and enhancing bloodstains. The applications are of particular use when bloodstains are latent or faint to the unaided eye.

Infrared digital imaging is more applicable to contemporary crime scene investigations due to the specificity of digital cameras and the ability to capture digital images with very long exposure values. FUJI digital cameras were once manufactured specifically for IR applications. The cameras are no longer manufactured, but there are numerous companies which sell digital cameras converted for infrared purposes (see [www.rcforensics.com](http://www.rcforensics.com)). In addition to a camera, infrared light must be present to capture an IR image. Light can be added via sunlight, and Alternate Light Source, a special infrared light, or a Photoflood bulb in the 3200-3400 Kelvin temperature range.

Infrared digital imaging can often produce a contrast between bloodstains and the substrate bearing the bloodstain. This is an especially useful application when the substrate is dark such as black socks, dark blue jeans, dark green shirts, dark brown carpet and similar substrate materials. Images can be captured with scale and placard, and can be used for comparison purposes. Although not specifically a bloodstain application, infrared imaging can capture information relating to bruising, and it can “shoot” through blood on a body so injury and wounds can be analyzed prior to washing the body. This information can become useful in the sense of the merging together of the facts, consilience, in making sense of the bloodstain patterns.

UV, or more accurately, blue light applications and a deep yellow filter are useful for capturing bruise information. Hemascein® ([http://www.abacusdiagnostics.com/hemascein.htm](http://www.abacusdiagnostics.com/hemascein.htm)) is a fluorescein based product. It is a solution that when applied to a scene with a spraying device can react with blood. Documented cases establish that Hemascein® can enhance latent shoe print stains and there is sufficient detail for comparison, and Hemascein® can enhance
latent bloody fingerprint impressions on a vertical surface and there is sufficient detail for comparison. Hemascein® is a safe solution, and reactions last for up to 15 minutes. Hence, digital imaging using a deep yellow filter can be used to capture Hemascein® enhanced images. A blue light must be applied to fully visualize the Hemascein® process. Hand held LEB blue lights have been show to be sufficient for the Hemascein® process, although alternate light sources such as those sold by SPEX Forensics (http://www.spexforensics.com/). The RUVIS instrument can locate latent bloodstains and blood fingerprint impressions. Research indicates that Hemascein® will not deteriorate DNA analysis, but application of the UV light from a RUVIS instrument can damage DNA after a two minute exposure.

Investigators should consider the use of Infrared (IR) digital imaging, Ultra-violet (UV) digital imaging, and Hemascein® as tools for crime scene investigations, applications in general, and specifically in any bloodstain pattern analysis process. When one thinks in terms of signs, semiotics, as the basis for information recognition, the preceding techniques assume a more prominent role for mining of useful information for the analyst. Check with your choice of photographic and crime scene supply vendors for information on equipment and materials, or contact the author.

A Meth Fueled Double Homicide Crime Spree

Erin Sims
Lincoln Police Department
Lincoln, Nebraska

Abstract:

Ms. Sims will give a presentation on a Methamphetamine fueled crime spree that spanned 4 days, 9 cities, 300 miles and culminated in a Double Homicide which occurred on a quiet Sunday morning, August 10, 2008. There were no witnesses to this crime and the only statement the suspect made to officials came at his sentencing hearing. In a prepared statement read to the court he apologized to the family, took full responsibility for the crimes, but did not tell the truth about what had occurred at the Bailey residence. The bloodstain patterns at the scene however, did….

“Where Is She?”

Peter Lamb
Forensic Science Service
Huntingdon, Cambs,
United Kingdom
**Abstract:**

In early 2010, a concerned mother reported the disappearance of her daughter. She had left behind her young daughter and husband and vanished overnight. The husband was so distraught that he decided to move house — the Police became suspicious and called the lab…… BPA opens up the enquiry!

**An Investigation of the Effects of Different Laundering Treatments on Commonly Used Fabrics in Regards to Bloodstain Pattern Formation and Analysis**

Victoria Richards¹, David Baldwin², Dan Zamzow², Iris Dalley³

1. Department of Chemistry, Cedar Crest College, Allentown, PA 18104
2. Ames Laboratory/Iowa State University, Ames, IA 50011

**Abstract:**

A common occurrence at crime scenes is a single or multiple bloodletting events, which often involves bloodstain formation on fabrics. The effect of the laundering history on the formation of bloodstain patterns on these surfaces is not well known. Thus, the objective of this study was to test the hypothesis that fabric treatments have a negligible effect on the formation of bloodstains on fabric surfaces. This research was conducted in support of the Department of Energy’s mission to promote scientific technology and innovation. The target surfaces were nine different fabrics commonly found at crime scenes: 100% cotton linen and terry towel, unknown polyester/cotton blend, 65/35 polyester/cotton blend, flannel, 10oz. weight denim, 12oz. weight denim, and two different 100% polyester fabrics. There were eight laundering treatments and a control to which each fabric type was subjected. These treatments consisted of commonly used brand name household laundering products. The control was an unscented liquid detergent. The following were the treatments studied: T1) scented liquid detergent, T2) liquid fabric softener, T3) fabric softener sheets, T4) scented detergent and fabric softener combination liquid, T5) bleach for whites, T6) color-safe bleach, T7) ironing, and T8) ironing with spray starch application. The types of bloodstain patterns created and analyzed were passive droplets from 90° and 30° as well as impact spatter. During the analysis of each bloodstain, the effects of the treatments were determined to be either none, mild, moderate, or severe when compared to a control. In regards to the passive droplet patterns, T2, T3, and T8 overall had the greatest effect on the bloodstain formation. T1 and T4 had the least effect. The remaining treatments affected the fabrics to a more moderate degree. Differences in fabric absorptivity, stain size, and visual comparison to the control were some of the effects observed. Compared to the trends previously noted two differences were observed for the impact spatter, T4 had severe effects and T1 andT6 had no effect. The hypothesis tested was rejected there were in fact noteworthy effects on the bloodstains formed on the differently laundered fabrics. These results can be used to fuel further research in this area of bloodstain pattern analysis (BPA) that has thus far been largely overlooked. Future studies may include different fabrics, possibly non-synthetics versus synthetics or different common household treatments.
Abstract:

This case involved the shooting of a hostage taker by two DSM police officers at a local department store. Just prior to this incident, the suspect had entered a nearby evening day care center, made aggressive advances toward an employee and then fled the center. Employees alerted police by telephone as the suspect entered the department store approximately one half block away.

Upon entering the department store, the suspect began acting very suspicious, making advances toward the clerks and informing them that he had a gun and intended to rob the store. One of these clerks also called police and shortly later the suspect took one clerk hostage, standing behind her with his arm around her and acting as if he had a gun in the other hand. Two DSM police officers arrived at the scene and after the suspect refused to release the hostage and began assaulting her, both officers fired their weapons, striking the suspect in the face and abdomen as he still held onto the clerk. Of interest to the bloodstain pattern analysts is that the clerk was wearing a white shirt and leaning forward as the bullets impacted into the suspect the dispersal pattern of the impact created spatter becomes visible on her shirt. This entire incident was captured on color video surveillance including the impacting bloodstains. Bloodstains created after the victim collapses are also captured on video surveillance.
Abstract:

This talk covers a variety of observations made by the speaker on items which were either submitted to the laboratory for examination, or observed whilst attending different crime scenes. These cover a variety of topics which have had some type of effect on the resulting blood patterns. This talk has been presented once before at a previous International IABPA conference and was repeated at the first European conference held in Middelburg, the Netherlands in 2006. As a result of many requests it was repeated earlier this year at the third European IABPA conference held in Lisbon and again here today. For the benefit of those that may have seen it before, there are a few additional photographs added. The speaker is flattered to be asked to repeat this talk again as it has obviously struck a chord with many. She hopes you find it thought provoking when carrying out your own BPA assessments and interpretations.
Workshops

Courtroom Testimony - Responding to Cross-Examination

Paul Erwin Kish (Presented by Iris Dalley, LeeAnn Singley and Stuart James)

Abstract:

The attendees of this presentation will acquire knowledge of how to respond to cross-examination during bloodstain pattern analysis testimony. The presentation is meant for those who are presenting or anticipating presenting expert testimony in bloodstain pattern analysis. The culmination of a bloodstain pattern analysis case is the presentation of expert testimony in court. The U.S. court system is an adversarial system where we have two opposing sides, the prosecution and the defense, each with their own conflicting agenda. The prosecution representing the State must prove their case beyond a reasonable doubt, while the defense is representing the accused and is attempting to illustrate doubt within the State’s case. The primary method for most defense attorney’s for illustrating reasonable doubt in the State’s case is through cross-examination of the State’s witnesses. Defense counsel will attempt to show doubt by discrediting the State’s expert witness and/or the discipline in which the expert is testifying. Alternatively, defense counsel may not be attempting to discredit the expert but rather to get the expert to waiver in the strength of their opinions by accepting other “possible” explanations for the evidence.

Through cross-examination attorneys typically attempt to: 1) solicit favorable information for their client; 2) discredit the discipline of Bloodstain Pattern Analysis (BPA); 3) discredit the expert providing BPA testimony. Cross-examination often begins with counsel soliciting favorable information but often ends in the attorney attacking the discipline and or the expert witness.

The scope of cross-examination questions can and often is extremely “broad” from what course you took in college, to theory of bloodstain pattern analysis, to error rate, to technical review process, etc. Cross-examination is almost never limited to what is in your report or the case at hand. Never underestimate or try to predict what an attorney may ask you during cross-examination!

This presentation will deal with a variety of questions that the author and others have encountered while presenting expert testimony on bloodstain pattern analysis. We will address tactics for answering problematic questions. Attendees will participate by answering some of these cross-examination questions.

Infrared Photography Workshop

Larry Barksdale
Lincoln Police Department
Lincoln, Nebraska

Jeff Scozzafava
Somerset County Prosecutor’s Office
Somerville, New Jersey

Hemospat Workshop

Andy Maloney
FORident Software, Inc.
Canada
OFFICERS IN ATTENDANCE:

Iris Dalley, President  
Carolyn Gannett, Vice President Region I  
Todd Thorne, Vice President Region III  
Peter Lamb, Vice President Region V  
Mark Reynolds, Vice President Region VI  
Norman Reeves, Secretary Treasurer  
Jeffrey Scozzafava, Sergeant at Arms  
LeeAnn Singley, Immediate Past President

5 October 2010 4:50 PM

President Dalley called a special meeting to order and advised that the board has approved the nomination of T. Paulette Sutton as distinguished member. A quorum of members was present at the meeting. The voting members present approved the nomination.  
5:00PM the special session was adjourned.

7 October 2010 10:20 AM

President Dalley called the membership meeting to order. A count of full members present was conducted and a quorum was verified. There was a moment of silence for the passing of Member Steve Kohne and Paul Kish’s wife Pamela.  
President Dalley 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 Silke Brodbeck and seconded by Phillipe Esperanca. The motion was approved.  
President Dalley 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. Grif Griffin made the motion to accept those listed for full membership and Rex Sparks seconded the motion. The motion was approved.  
Minutes of the 2009 Conference Business Meeting had been published in the newsletter and a copy was available at the 2010 Conference. A motion was made by Todd Thorne to accept the minutes as published. Seconded by Kevin Maloney. The motion was approved.
VICE PRESIDENT’S REPORTS:

Region I

Carolyn Gannett reported that she processed approximately twenty-two applications and eight requests for promotion. One possible ethics violation is pending receipt from the complainant. One bloodstain course was reviewed and approved for attendees to become members of the IABPA. Gannett indicated that she has been trying to assemble a comprehensive regional e-mail list gathered from applications and other sources. Gannett discussed the government NAS report. There is a discussion about a Federal Code of Ethics replacing ASCLD’s Code of Ethics. Vice President Gannett then reported information regarding the National Science and Technology Council, Committee on Science, Subcommittee on Forensic Science and whether the IABPA should contact the NAS regarding bloodstain pattern analysis. Further comments were made regarding the International Forensic Strategic Alliance and IABPA’s monitoring of the Alliance activities.

Gannett indicated that she is stepping down as Vice President of Region I and is willing to participate on IABPA committees.

Region II

Jon Forsythe-Erman reported that he was unable to attend this conference. Jon attended the European Conference in Lisbon this year and made a presentation. Jon is stepping down as Vice President this year and he has enjoyed his service with the IABPA as Vice President.

Region III

Todd Thorne reported processing approximately twenty applications and request for promotions. Vice President Thorne discussed an effort to increase and improve communications with his constituency and has discussed this with other Vice Presidents.

As the Dan Rahn Grant committee chairman, modifications regarding the amount and clarification of the use of the money for research and travel to the conference to report were discussed. Michael Taylor should have the final revisions ready very soon. Thorne and several others served on the SWGSTAIN document review committee under the leadership of Kevin Maloney.

The Wisconsin proposed Digital Forensic Bill was defeated in Wisconsin. Thorne was involved with an ethics issue in his region this year. He attended the 2010 Bloodstain Symposium in Iowa and worked on the Certification Committee this year. The IABPA merchandising is progressing with new ideas.

Vice President Thorne reports hosting the 2011 Annual IABPA conference in Milwaukee Wisconsin is progressing on schedule.

Region IV

Craig Stewart was not able to attend this year’s conference. Craig is not running for Vice President this year.
Region V

Peter Lamb processed nine applications and request for promotions this year. One incident required several months of effort to obtain an instructor’s course materials, which are now on file with the IABPA.

The Lisbon, Portugal conference had about one hundred attendees. Economic conditions are affecting attendance at conferences and courses. There have been requests for courses and Stuart James, Paul Kish, Silke Brodbeck and Martin Eversdijk have provided courses in Europe.

Proposals for the 2012 meeting are Turkey, which was rejected by the IABPA, Italy that was withdrawn at the last minute and Nantes, France.

There are calls for proficiency testing from mainly laboratory personnel in Europe. Language translations of BPA in Europe are an ongoing issue.

Region VI

Dr. Mark Reynolds reported that applications for membership in his region were low (2). Korea hosted an advanced course with Pat Laturnus. Dr. Michael Taylor and Pat Laturnus taught a fluid dynamics course in Minnesota. Reynolds discussed development with training in Australia as well as SWGSTAIN and language problems. He requested SWGSTAIN forms be completed at the conference.

Reynolds stated that he is stepping down from the Vice President position.

TREASURER/MEMBERSHIP CHAIRMAN’S REPORTS:

The financial well being is good for the organization and the report was provided in the hospitality room. We have been able to provide for Board members to attend the conference in Europe. Norman Reeves did not attend and Board members Dalley and Forsythe were given financial assistance to attend. Reeves reported that as of September the IABPA had a net worth of $163,000. The average yearly expenses are about $53,000. The IABPA currently has eight hundred and eight members down slightly from last year.

SERGEANT AT ARMS:

No activity except some inappropriate comments in emails that were resolved.

HISTORIAN’S REPORT:

Herbert MacDonell was unable to attend and President Dalley provided the content of his report to the membership.

COMMITTEE REPORTS:

Education Committee:

John Amish reported that the committee is working on an advanced course curriculum. President Dalley requested a final product be available by the 2011 Annual Conference. Carolyn
Gannett made a motion the information be posted on the website for review by the membership as a whole. Silke Brodbeck seconded the motion and the motion was granted. Further discussions will be conducted at the 2011 Annual Conference.

President Dalley discussed a review of a web-based BPA course. The course was lacking practical laboratory experience. A discussion of web-based courses from universities was had by the membership at the meeting. There was a discussion regarding training opportunities on the website not endorsed by the IABPA.

**Ethics Committee:**

Gillian Leak reported that they have received one case and the results have not been determined. Two more cases may be pending. Leak reported that the by-law is in need of revision regarding our ethics section. President Dalley discussed ethics and appropriate actions by members and responsibilities.

**Editor’s Report:**

Stuart James indicated that the newsletter is doing well online and is enhanced over the print editions because of the color images. James made the request for articles and presentations given to be provided for publication. PDF files of the newsletter are online from 1984 to the present.

Joe Slemko, the IABPA web master, commented about having a discussion board on the website. There was a discussion on the floor regarding the discussion board and monitoring techniques. Andy Maloney offered to help develop a discussion board concept on the website.

**Research/Grant Committee:**

Dr. Michael Taylor stated that the Dan Rahn Grant was not used this year. Taylor discussed several proposed changes to the grant to include: start up money, a requirement that funds are set aside to come to the conference and make a presentation, a time table for the northern and southern hemisphere that differ and that a non member may be sponsored by a member for the grant. The new proposed amount of the grant will be $3000.00. Dr. Taylor displayed changes to the grant on the screen for the membership to review. Updates regarding the grant will be on the website in the future.

**Ad Hoc SWGSTAIN Committee:**

Kevin Maloney reported the committee has nine members and they have reviewed documents via e-mail throughout the year. Maloney will continue to provide SWGSTAIN with comments from the membership. Anyone interested in becoming a member of the committee should contact Maloney. Reports are made to the President of the IABPA regarding documents reviewed.

**OLD BUSINESS:**

There was no old business
NEW BUSINESS:

President Dalley discussed an Ad Hoc Committee formed regarding the NAS report and certifications issues. Don Schuessler was chair of the committee.

There were no additional nominations for Regions I, II, III, IV and VI, Secretary Treasurer, Sergeant at Arms and Historian. Motions for all nominations were seconded and approved. Todd Thorne made a motion to close the nominations and Silke Brodbeck seconded the motion and the motion was approved. Todd Thorne read Don Schuessler’s report of the committee. There were four members of the committee.

A brief survey was constructed to assess the membership’s input regarding certification. The survey was noticed in the newsletter and website. Only 26 members responded to the survey. The majority of the 26 members responding supported a certification program. Because of the low response to the survey, the committee does not feel comfortable making a recommendation. President Dalley discussed the survey. LeeAnn Singley discussed IAI’s certification.

Carolyn Gannett is the by-laws committee new chairman. After the board meeting I was asked to discuss limiting Vice Presidents to two year terms to allow more people experience on the IABPA Board. A review of the ethics section of the by-laws will be done. Mark Reynolds, Andre Hendrix and Silke Brodbeck have offered to be on the committee.

NOMINATION COMMITTEE REPORT:

The Board recommended the following for office for the year 2011:

President Todd Thorne
VP Region I John Amish
VP Region II Leah Innoci
VP Region III Rex Sparks
VP Region IV Jeffrey Scozzafava
VP Region V Peter Lamb
VP Region VI Brett McCance
Secretary Treasurer Norm Reeves
Sergeant at Arms Anthony Mangione
Historian Stuart James

There were no additional nominations from the floor and all of the above nominations were seconded and accepted by the body.

ADJOURNMENT:

12:20PM Rod Englert made a motion to adjourn and Kevin Maloney seconded the motion and the motion was approved.
2011 IABPA Annual Training Conference to be held in Milwaukee, Wisconsin – October 3-7, 2011

The conference host is Todd A. Thorne

The conference location will be the Milwaukee Hyatt Regency Hotel

Additional Training Conference information will be published in the March 2011 issue of the IABPA NEWS

Todd A. Thorne
T. Paulette Sutton Receives Distinguished Member Award

T. Paulette Sutton accepts the IABPA Distinguished Member Award from IABPA President, Iris Dalley.

T. Paulette Sutton, MS, MT(ASCP), CLS is a forensic consultant since retiring from the Shelby County (Memphis) Medical Examiner’s Office in 2006. At retirement, she was the Assistant Director of Forensic Services and the Director of Investigations for the Division of Forensic Pathology. She had been a practicing forensic scientist for the Serology Laboratory with UT Memphis since 1977 and specialized in Bloodstain Pattern Analysis and crime scene reconstruction. Since retirement, she has continued to teach Bloodstain Pattern Analysis and serve as a consultant to pathologists, attorneys and investigators from numerous State and Federal Courts and provide expert testimony in criminal and civil trials.

She holds a B.S. degree in Medical Technology from the University of Tennessee in Memphis and an M.S. in Operations Management Engineering from the University of Arkansas. Academic appointments at the University of Tennessee in Memphis included: Associate Professor of Clinical Laboratory Services and Instructor in the College of Medicine and Nursing. She serves on the faculty of the National College of District Attorneys, the National Science Foundation, the University of Arkansas Criminal Justice Institute, the National Forensic Academy, the Northwestern University School of Law and the University of North Texas. In addition to being a member of the IABPA and an Associate Editor of the IABPA NEWS, she is a member of the Scientific Working Group on Bloodstain Pattern Analysis and the Forensic Editorial Review Board for CRC Press.

Ms. Sutton is a co-author of Principles of Bloodstain Pattern Analysis – Theory and Practice published in 2005. She has also contributed to the texts, Interpretation of Bloodstain Evidence at Crime Scenes, CRC Press, 1998, Scientific and Legal Applications of Bloodstain Pattern Interpretation, CRC Press 1998 and Forensic Science – An Introduction to Scientific and Investigative Techniques, CRC Press, 2003, 2005 and 2009. Honors include the Lecturer of Merit Award and Distinguished Faculty Award from the National College of District Attorneys and the Outstanding Service Award from the FBI.
Abstracts of Recent Publications in the Scientific Literature


Abstract:

An article appearing in this journal in 2000 suggested that the sensitivity of the luminol test performed on denim fabric is usually no greater than a 1:100 dilution of blood. This study shows that the luminol test may be unambiguously interpreted at substantially greater dilutions of blood. In this study, four different types of denim were tested by spraying a swatch of fabric with a typical formulation of the luminol reagent. Testing was conducted of dilutions of blood up to 1:1000, all of which showed distinct chemiluminescence. Diluted blood was applied to denim material in the form of a random number. A successful test was obtained only when a “blind” observer who was uninformed of the number, correctly reported the number.

Howard, Maria C., and Nessan Mitch, Detecting Bloodstains under Multiple Layers of Paint, Journal of Forensic Identification, 60 (6), 2010, pp. 682-717.

Abstract:

Using five different techniques {alternate light source (ALS), infrared (IR), BlueStar Forensic, luminol, and fluorescein}, bloodstain patterns were detected beneath layers of paint. As a source of visualization and documentation, photographs were taken of the results. Results of this experiment show that all five techniques were effective in detecting bloodstain patterns beneath layers of paint.
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 2011 please contact Norman Reeves. Apparently, non US credit cards are charging a fee above and beyond the $ 40.00 membership/application fee. Your credit card is charged only $40.00 US by the IABPA. Any additional fees are imposed by the credit card companies.

IABPA now accepts the following credit cards:

Discover     Mastercard
American Express   Visa
Training Opportunities

January 17-21, 2011
Math and Physics of Bloodstain Pattern Analysis
Miami-Dade Public Safety Training Institute
Miami, Florida

Contact: Officer Phil Sanfilippo
Tel: 305-715-5028
E-mail: psanfilippo@mdpd.com

January 24-28, 2011
Advanced Bloodstain Pattern Analysis
Galveston, Texas

Instructors: Tom Bevel and Jon Priest
Contact: Craig Gravel, Training Coordinator
Tel: 405-706-8489
E-mail: regravel@aol.com

March 21-25, 2011
Basic Bloodstain Pattern Analysis Course
Usingen, Germany
(English)
For further information contact:
Dr. Silke Brodbeck, MD
Blutspureninstitut
Obergasse 20
61250 Usingen
Germany
Tel: +49-170-84 84 248
Fax: +49-6081-14879
E-mail: info@blutspureninstitut.com
May 2-6, 2011
Basic Bloodstain Pattern Analysis Course
Usingen, Germany
(German)

For further information contact:
Dr. Silke Brodbeck, MD
Blutspureninstitut
Obergasse 20
61250 Usingen
Germany
Tel: +49-170-84 84 248
Fax: +49-6081-14879
E-mail: info@blutspureninstitut.com

May 2-6, 2011
Basic Bloodstain Pattern Analysis
Norman, Oklahoma

Instructors: Tom Bevel and Craig Gravel
Contact: Craig Gravel, Training Coordinator
Tel: 405-706-8489
E-mail: rcgravel@aol.com

June 13-17, 2011
Basic Bloodstain Pattern Program
Bloodstain Evidence Institute
Contact: Herbert Leon MacDonell, Director
Post Office Box 1111
Corning, New York 14830
Tel: 607962-6581
E-mail: forensiclаб@stny.rr.com

September 19-23, 2011
Basic Bloodstain Pattern Program
Bloodstain Evidence Institute
Contact: Herbert Leon MacDonell, Director
Post Office Box 1111
Corning, New York 14830
Tel: 607962-6581
E-mail: forensiclаб@stny.rr.com
September 19-23, 2011
Advanced Bloodstain Pattern Analysis Course
Usingen, Germany
(German)

For further information contact:
Dr. Silke Brodbeck, MD
Blutspureninstitut
Obergasse 20
61250 Usingen
Germany
Tel: +49-170-84 84 248
Fax: +49-6081-14879
E-mail: info@blutspureninstitut.com

August 29 - September 2, 2011
Advanced Bloodstain Pattern Analysis Course
Usingen, Germany
(English)

For further information contact:
Dr. Silke Brodbeck, MD
Blutspureninstitut
Obergasse 20
61250 Usingen
Germany
Tel: +49-170-84 84 248
Fax: +49-6081-14879
E-mail: info@blutspureninstitut.com

Articles and training announcements for the March 2011 issue of the IABPA News must be received before February 15th, 2011
Editor’s Corner

On behalf of our membership I congratulate T. Paulette Sutton for achieving the award of Distinguished Member of the IABPA during the 2010 IABPA Training Conference. This award is well justified and deserved for her outstanding achievements in forensic science and bloodstain pattern analysis.

Jeff Scozzafava of the Somerset County Prosecutor’s Office in Somerville, New Jersey did an outstanding job as the host of the 2010 IABPA Annual Training Conference held at the Tropicana Hotel in Atlantic City, New Jersey. I would also like to thank the members of the Somerset County Prosecutor’s Office and Anthony Mangione of the Hamilton, New Jersey Police Department for their assistance with Conference details. There were 93 registered attendees that represented the United States, Canada, Australia, New Zealand, France, the Netherlands, Germany and the United Kingdom.

The 2011 IABPA Training Conference will be hosted by Todd A. Thorne in Milwaukee, Wisconsin. The March 2011 issue of the NEWS will feature more detailed information on hotel rates and a tentative program for the conference. He is working hard on the organization of the conference. As President Iris Dalley wrote in her President’s Message, now is the time to request the workshops and/or instructors and discussions topics you want at your conference. Plan on making a presentation of a research project or interesting case review during the regular sessions or the “bring your own case” evening session.

Finally, I congratulate Misty Holbrook for receiving the Forensic Services Support Award from the Kentucky State Police Commissioner, Rodney Brewer and Public Safety Cabinet Secretary, J. Michael Brown. Misty is employed at the Kentucky State Police Cold Springs Laboratory branch in Northern Kentucky as a bloodstain pattern analysis technical leader. She has done excellent research on bloodstain pattern analysis on fabrics and her work was recently published in the March, 2010 issue of the IABPA NEWS.

Stuart H. James
Editor – IABPA NEWS
jamesforen@aol.com
## Past Presidents of the IABPA

<table>
<thead>
<tr>
<th>Name</th>
<th>Years</th>
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<tbody>
<tr>
<td>V. Thomas Bevel</td>
<td>1983-1984</td>
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<tr>
<td>Charles Edel</td>
<td>1985-1987</td>
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<td>Warren R. Darby</td>
<td>1988</td>
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<td>Rod D. Englert</td>
<td>1989-1990</td>
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<td>Edward Podworny</td>
<td>1991-1992</td>
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<td>Tom J. Griffin</td>
<td>1993-1994</td>
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<td>Toby L. Wolson, M.S.</td>
<td>1995-1996</td>
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<td>Daniel V. Christman</td>
<td>1997-1998</td>
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<td>Phyllis T. Rollan</td>
<td>1999-2000</td>
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<td>Daniel Rahn</td>
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<td>Bill Basso</td>
<td>2002-2006</td>
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<tr>
<td>LeeAnn Singley</td>
<td>2007-2008</td>
</tr>
</tbody>
</table>

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