

Iowa Division of the IAI 4N6

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The Iowa I.A.I. was formed in 1963 as the 6th state chapter of the parent body – International Association for Identification. We have over 200 Active, Life, and Associate members and are proud to present this resource for the study of law enforcement forensics.

The Iowa I.A.I. has always strived to become more diverse, with members from a broad range of experience in forensic science. If you're interested in becoming a member, please apply through our site. It's a great place to continue your education, ask questions with your peers and meet others in your field of work.

Are you a student? Student memberships and discounted conference rates are offered and a great way to network and get hands-on experience!

<http://www.iowaiai.org/about/membership/membership-form/>



All of us here at the Iowa IAI would like to wish you and your families a Merry Christmas and Happy New Years! Thank you for all of your hard work and dedication during this holiday season, stay safe!!!!

Save the Date!

The 2020 Iowa IAI Educational Conference and Business Meeting will be held November 4th-6th, 2020 in Waterloo, IA



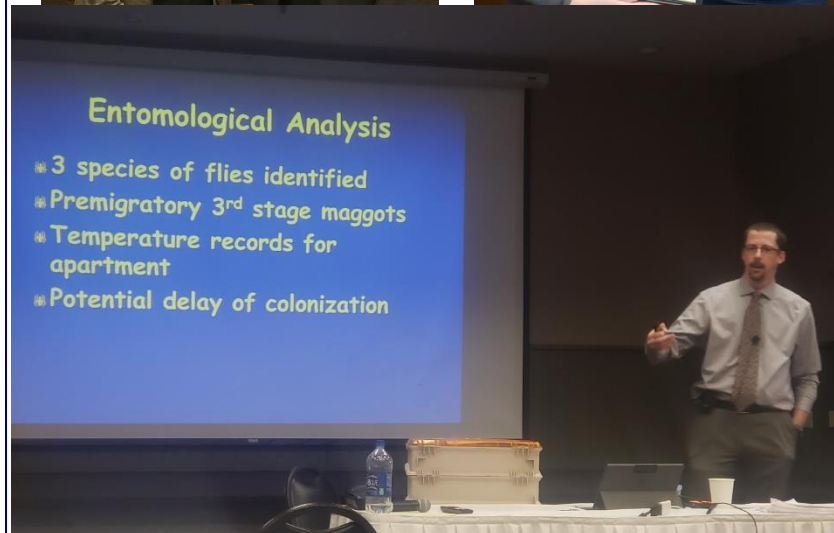
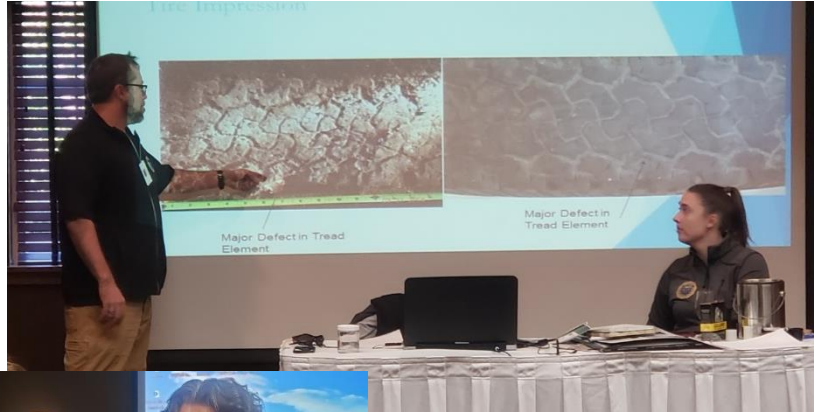
This is a great way for your agency to get some quality training at a low cost.

More information to coming soon:
<http://www.iowaiai.org/iowa-iai-conference/>

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2020 Educational Conference Highlights:



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We would like to thank the following **Vendors** for their support of the Iowa IAI. They have played an integral part of making our 2019 Educational Conference a huge success!



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Photography of Gunshot Wounds

Patrick E. Besant-Matthews, M.D.

The majority of EPIC members are full time photographers or use photography as a routine part of their work. Accordingly there is little need to describe how to take a photograph, but there is a need for a list of pointers to help those who do not photograph gunshot wounds frequently.

Just like crime scene photos there is a need for "walk-up" or introductory photographs.

Just as a photograph of a car will have less value if there isn't a view to show where it came to rest after a crash, a close-up of a gunshot wound will have less value if we don't know where on the body surface it was located. So we must take one or more photographs to show where each wound was located, and what each of them looked like. In short, make sure that the close-ups of the various wound can be easily identified and distinguished from one another unless there is an obvious landmark in the field of view, such as an ear or an eye. If there's only one entry wound, or just an entry and an exit, then it's relatively Simple, but if there are multiple entrance and exit wounds you will probably need to take a series of photographs, such as: (a) the front of the body (b) the back of the body (c) one or two sides if there are any wounds in these locations (d) enough closer views to show the overall characteristics of individual wounds (e) close-ups of each wound, including one with a scale of size. If there are numerous wounds, for instance 20-30 small caliber wounds that look much alike, it may be necessary to assign each a number and identify each wound with a fine marking pen or small adhesive label.

Scales of size are important.

The reason we often have to take one with and one without a scale is that if you put one in an attorney may claim that it covered something important, and if you don't put one in he may object because it wasn't there.

You don't necessarily have to take each wound in close-up with and without a scale so long as you have at least one fairly close-up photograph to show that nothing was covered by the scale when you did use it. The possible presence of soot and gunpowder are the main reason for this, but there are others.

It's up to you to decide if you want to use a scale marked in inches or centimeters. Either will work however the problem is that the average juror does not think in centimeters, only in inches. If you don't believe me, simply testify the wound was located 80 cm below the top of the head, and you will see blank looks. If you say it was 31 ~ inches below the top of the head they will understand. I know of one case in which a wound of the chest was described by a pathologist as being 5.0 x 5.5 cm in dimension, and nobody noticed until trial that the shotgun slug which caused it only had a diameter of 3/4 inch. The metric system is great, and the sooner we adopt it the better, however the fact remains that most jurors in the US do not think in terms of centimeters, kilometers, joules, milliliters and ergs. A dab of Vaseline or thick ointment will often hold a scale in position on the body surface while a photograph is taken.



In most cases it's highly desirable to document the body surface as completely as you can.

I'm not advocating a detailed view of each ear canal and the anus to show the absence of wounds in obscure locations, but it is most desirable to fully document the surface of the body including the back and sides to show the absence of wounds, particularly in high profile cases. Suppose for instance that a teenager of one racial group is shot by a police officer of another racial group, and that the usual racial allegations and slurs arise. If the bullet came to rest under the skin of the back and was recovered by making a 3/4 inch cut in the skin, than if the body is examined for a second time and the clothing is lost, there will be claims of a wound in the back and a cover-up. In such cases having several photographs to show that there was no wound of any kind in the back is simply invaluable.

When the average bullet travels into the body it generally follows a path that is close to being a straight line or slightly curving.

The point is that, in most cases, the direction of the bullet within the body is easily recorded by inserting a stainless steel probe (or failing this a disposable dowel rod) in the wound track and photographing the angle in all three axes, front/back, right/left and up/down. In the event a bullet enters, strikes something such as bone and then deviates, the probe should be adjusted to best show the angle at which the bullet entered. Then a note should be added that it deviated before it exited. It would be worth recording the angles at which it exited if it did anything noteworthy after leaving the body. Properly taken photographs should take care of the angles, but if nobody else takes the trouble to do so, you could measure the approximate angles (to the nearest 5° or so) using the standard "standing-at-attention-palms-to-the-front" anatomical reference position. (e.g. The bullet path was from front to back, from right to left at about 45° with respect to the front-back plane, and from above downwards at about 30° with respect to the horizontal.)

There are two main types of residues associated with gunfire, visible and invisible.

The visible ones that concern us most are gunpowder and soot. If you observe either or both of these on the skin or clothing, be sure to take photographs to document their extent and distribution. I won't go into invisible residues, such as primer residues and lead dust.

Always examine and prepare to photograph the hands of an injured person or victim in a good light, especially if the weapon was within a few feet of the person at the time it was discharged.

In suicides for instance, gases and soot leaking from the cylinder-barrel interface (so-called "cylinder flare") of a revolver may be found on the hands.

Always look at the clothing if there is any.

The clothing is often the most important evidence. Bullets often pass through clothing and miss the wearer, but suppose you had a police shooting and there was a bullet hole passing upwards through the side of a shoe without injuring the foot. People overlook such things. Always look for soot and gunpowder on the outermost layers of clothing and in your mind try to correlate each wound with the holes in the clothing. Don't worry if you can't make everything fit, clothing is often wrinkled, folded or out of position, resulting in more than one hole per bullet. The more bullets the more difficult such a correlation becomes, and clothing is even worn inside out. Don't worry about this because you're not trying to do the work of the crime lab, but suppose one bullet went through an arm and that there's only one hole in a sleeve then might there not be a bullet in the clothing? Always look at the clothing and photograph anything you see.

The object of wound documentation is to provide data necessary for solving problems, it is not an exercise in human anatomy.

A typical courtroom situation is that a bullet passed upwards at about 10° through a door frame, and exited the frame at a point centered 38 inches above the floor. If you noted that the bullet passed upwards into a deceased cocktail waitress at the same angle, and entered her body through a wound located (allowing for 2 inch heels) 44-1/4 inches above the floor, then it doesn't take a Ph.D. in mathematics to know that the side of her body, through which the bullet entered, was located about 3 feet from the door frame at the time the bullet struck, not 8 feet as claimed by the defense. If you have localized the hole in relation to some meaningless anatomical landmarks, and an attorney subsequently asks you how far above the floor the wound would have been, assuming that she were upright and carrying a tray, you will be unable to answer the question with reasonable accuracy. Common errors include:

- Measuring to the edges of wounds instead of to their centers. You can get away with this for a single wound, but if there are several the distances between them will seldom add up without superhuman organizational and mathematical effort. Any calculation of angles will almost invariably be based on the center of the line along which a bullet passed, or close to the center of individual wounds which are not

asymmetric in nature. The only point to consider in this regard is what you are going to do if say a bullet enters at one end of wound that is perhaps 1 1/4 inches long. Personally I state where it entered and then describe a greater extension of the wound in one direction and explain that it is due to angulation, or bone, or whatever it was.

- (Use of illogical landmarks. If the gunshot wound is high on the left forehead almost into the head hair then it should be related to the top of the head and the midline of the head and to the ear canal, not to the base of the right heel. If the deceased is found to be 72 inches tall and the wound is 4 inches below the top of the head you ought to be able to deduce the distance above the heel if someone should ask, and can convince you or asks you to assume, that the victim was standing erect when he was injured. Note therefore, that distances below the top of the head and above the heel should be measured vertically, not around the side of the legs and across curvatures of the chest and abdomen. Assume that the deceased is standing and that you are measuring the positions with a straight surveyor's rod.
- If measurements are made around a body curvature, make this fact clear in the description. Failure to do so will make a wound recorded as being 5 1/2 inches to the left of the front midline of the face sound as if it's out in space somewhere in space on the left of the head, rather than just in front of the upper part of the left external ear. The external ear canals themselves are good landmarks on the sides of the head. The notch at the top of the breastbone and the outer corners of the eyes are also examples of landmarks which are not going anywhere.
- If a wound is found on a mobile part of the body, for example near an elbow, don't be satisfied with recording that it is 38 inches above the base of the heel. You must also relate it to a fixed landmark in its own area, in this case probably the elbow joint. It may come out in court that the victim was shot with his hands held above his head. Now how far would the wound be from the heel?
A common failing is to note the direction of a track in the chest, but not in the adjacent arm which the bullet passed through on route to the chest. The inexperienced person may say that the position of the arm is unpredictable and/or unknown, which sounds plausible but misses the point. If the bullet track was horizontal in the chest and 20° upwards in the adjacent arm then the arm must have be angled about 20° away from the vertical at the moment of injury to line up. Failure to give estimates of the direction of wounds in limbs often prevents the reconstruction of events and prevents experts from estimating the relative position of body parts.
- Do not measure the location of one bullet wound to another, and report something like ..."4 inches below and 1 inch to the right of the wound just described there is a gunshot wound of entry". If you make a mistake with the first you will automatically mess up the second. Each wound should be recorded with respects to fixed landmarks, such as the base of the heels, the top of the head, the center line of the body or limb, etc.

When a person is standing it's easy to orient a camera with respect to the head.

However when a living or dead victim is lying on a stretcher or autopsy table with the head on a pillow or a head block the head assumes an unnatural attitude.

It is a convention that the horizontal in the head runs from the lower edge of the bone of the eye sockets to the upper edge of the bony ear canal. This is called the Frankfort plane. If this plane is held parallel to one edge of the viewfinder when a photograph is taken the resulting print will appear natural.

When you put the scale of size and case number on or next to the victim, be sure to orient it so that it's the natural reading position.

For instance if a victim is standing the numbers and letters should be parallel to the floor. If the victim is lying down the numbers and letters should still be parallel to the floor. If you put them vertically and take a picture, when a juror picks up the photograph he or she will instinctively put the wording horizontal and sense that something is wrong and that the person appears to be leaning against a sheet or is about to slide to the floor.

If you put the scale parallel to the floor the juror will immediately see that the victim was lying down when you took the picture.

Many emergency department photographs are taken in less than ideal circumstances.

For instance you may be cramped into a narrow space between two stretchers and a curtain. In such circumstances make sure you keep the camera and film parallel to, or at right angles to, the floor. If you tilt the camera the victim will appear to be lying on a tilted stretcher and seemingly about to fall on the floor. Jurors will try to work out what's "wrong", instead of concentrating on the injuries depicted.

Use a form which to help you to document gunshot wounds

Attached is a form which will help you to document gunshot wounds properly and thoroughly. If a victim is alive you may not be able to fill in all the blanks. If so simply fill in everything you can and make a note in the blanks to show you didn't omit something by accident.

Use one form per bullet. I have provided one as an example, and a blank to copy. What notes you make about the camera, lens and film a personal or local decision.

Case No: EPIC 11-96

Description No: 1 Range: DISTANT/LONG Name: A.N. OTHER

Location of entry wound: FRONT OF LEFT UPPER CHEST 16 1/2" BELOW TOP OF SHOULDER AN 1/4" LEFT OF MIDLINE - 3 1/2" DIAGONALLY ABOVE AND INSIDE LEFT NIPPLE

Size and description of entry: 1/2" DARTER WITH SHARPENING 7/16" OF MAXIMAL ABNORMAL. TOTAL 3/8" MAX

Clothing at entry: WHITE T-SHIRT - BLOOD STAINED

Radiographic appearance: NOT TAKEN (NOT DEVELOPED)

Track and injuries, in sequence including blood in cavities, hematomas and associated features: N/A - GOING TO SURGERY

Recovery location: N/A

What was recovered, how recovered and how marked: N/A

Exit wound location and description: SHIRT OPEN, SLIGHTLY FOAM-SHAPED 1/4" MAXIMUM

Clothing at exit: WHITE T-SHIRT - BLOOD STAINED

Direction, in anatomic position: FRONT TO BACK, NOT SIGNIFICANTLY RIGHT/LEFT OR UP/DOWN

Other notes: N/A

Residues: NONE VISIBLE (NO SWEAT OR POWDER)

Case No: _____

Description No: _____ Range: _____ Name: _____

Location of entry wound: _____

Size and description of entry: _____

Clothing at entry: _____

Radiographic appearance: _____

Track and injuries, in sequence including blood in cavities, hematomas and associated features: _____

Recovery location: _____

What was recovered, how recovered and how marked: _____

Exit wound location and description: _____

Clothing at exit: _____

Direction, in anatomic position: _____

Other notes: _____

Residues: _____

About the Author

Patrick Besant-Matthews, M.D. is a highly acclaimed and popular consultant and lecturer in the area of forensic medicine and criminalistics. He is the former Deputy Chief Medical Examiner for Dallas County, and Chief Medical Examiner for Seattle/Kings County.

He has presented thousands of programs to nurses, physicians, law enforcement officials, and various scientific groups. He is also an experienced expert witness, and is highly skilled in the area of medical photography. Dr. Besant-Matthews was an integral contributor to the origination of the American Association of Forensic Nurses. His expertise in his field, his sense of humor, and his flair for drama combine to produce a highly enjoyable seminar.



****This article was originally featured Sept. 24th, 2019 by the Crime Scene Investigator Network****

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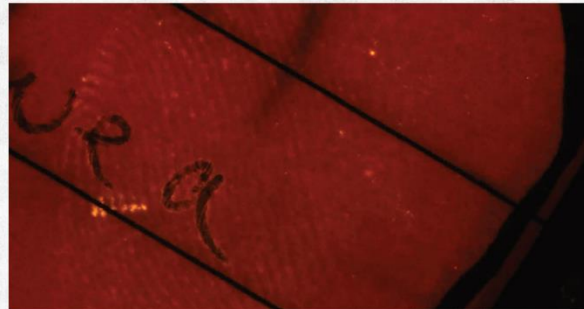
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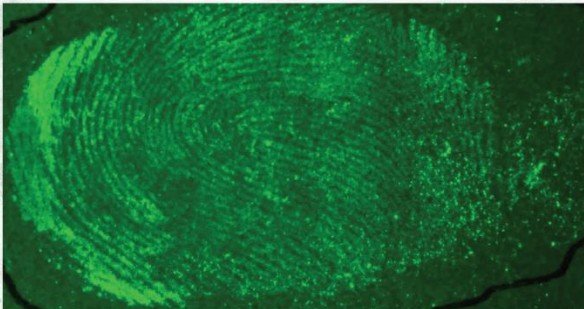
** photos courtesy of Brian Dalrymple, CLPE



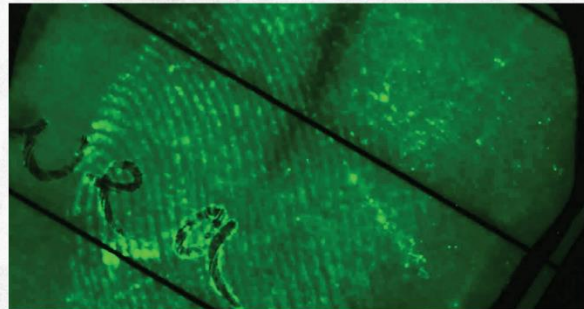
Prints treated with Indanedione. Photographed with **curved orange barrier filter**.
Fluoresced with the 532nm TracER Laser. 1/40 second exposure time.



Untreated prints on journal paper. Photographed with **curved orange barrier filter**.
Fluoresced with the 532nm TracER Laser. 1/20 second exposure time.



Prints treated with Indanedione. Photographed with **curved orange barrier filter**
and **FF-1.0 filter** Fluoresced with the 532nm TracER Laser. 1/0 second exposure time.



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BULLETIN STANDARDS

December 2019

Bulletin Summary

The [Organization of Scientific Area Committees \(OSAC\) for Forensic Science](#) Standards Bulletin provides an update on forensic science standards that are moving through the Registry Approval Process at OSAC and those moving through the development process at standards developing organizations (SDOs).

The [OSAC Standards Bulletin](#) is organized to capture the following standard development phases in the OSAC Registry Approval and SDO processes:

- After being published by an SDO, selected standards and guidelines may proceed to the OSAC Registry Approval Process where they are evaluated further for technical merit and impact on the forensic science community.
- In the SDO process, OSAC committees or task groups submit an idea (i.e., work item), a partially drafted document, or a fully drafted document to an SDO for further development, commenting, and publishing.

[Number of New Standards Placed on the OSAC Registry:](#) One (1)

[Number of OSAC Registry Documents Open for Comment:](#) Three (3)

[Number of SDO Documents Open for Comment:](#) Five (5)

OSAC Registry Updates



The [OSAC Registry](#) serves as a trusted repository of high-quality, science-based standards and guidelines for forensic science practice. A document included on the Registry has progressed through the formal SDO process and has been

published as a standard. OSAC elevates standards to the OSAC Registry as an endorsement of the document's high quality and to encourage its adoption by relevant stakeholders in the forensic science community.

New Documents on the OSAC Registry

OSAC is excited to announce the following standard has been placed on the OSAC Registry:



[ISO 21043-2 Forensic Sciences – Part 2: Recognition, recording, collecting, transport and storage of items](#)
(OSAC Interdisciplinary Virtual Subcommittee, effective December 3, 2019).

Intent to Add to the OSAC Registry – Documents Open for Comment

OSAC is currently seeking feedback on whether the following standards should be included on the OSAC Registry:

- [ANSI/ASB Standard 020, Standard for Validation Studies of DNA Mixtures and Development and Verification of a Laboratory's Mixture Interpretation Protocol, First Edition, 2018](#). Please [submit your comments](#) by **11:59 PM ET on December 13, 2019**.
- [ANSI/ASB Standard 040, Standard for Forensic DNA Interpretation and Comparison Protocols, First Edition](#). Please [submit your comments](#) by **11:59 PM ET on December 13, 2019**.
- [ASB Technical Report 097, Terminology Used for Forensic Footwear and Tire Evidence, First Edition](#). Please [submit your comments](#) by **11:59 PM ET on January 3, 2020**.

For a complete list of standards currently under consideration for placement on the OSAC Registry, along with their status in the approval process, please visit the [OSAC website](#).

If your organization is on the “tip of the spear” and has already embraced the [OSAC Registry implementation](#) efforts, let us know! Please email mark.stolorow@nist.gov to share your experience.

SDO Updates

Comment Period Open on Draft Documents

Consider sharing your expertise by commenting on the following documents to ensure they are technically sound and aligned with the needs of the forensic science community.

American Academy of Forensic Science Standards Board (ASB):

- [ASB 125, Organizational and Foundational Standard for Medicolegal Death Investigation](#). This new standard outlines the minimal requirements, fundamental activities, general procedures, facilities, and personnel that are the basic components of a medicolegal death investigation system. **Comment deadline December 16, 2019.**
- Recirculation* - [ASB 018, Validation Standards for Probabilistic Genotyping Systems](#). This new standard describes the requirements to be used by laboratories for the validation of probabilistic genotyping systems related to interpreting autosomal STR results (amelogenin is not covered by this standard). **Comment deadline December 30, 2019.**
 - *Please note that comments on a re-circulation will only be accepted on revised sections of a document, comments made to text not revised from the original comment period will not be accepted.

- [ASB 049, Best Practice Recommendation for Lifting of Footwear and Tire Impression Evidence](#). This new standard provides the best practice recommendations for personnel responsible for lifting footwear and tire impressions to optimize the recovery of these impressions. **Comment deadline December 30, 2019.**
- [ASB 093, Standard Test Method for the Examination and Testing of Firearms](#). This new standard establishes procedures for the examination and testing of a firearm by firearm and toolmark examiners or technicians. Following these procedures, an examiner or technician will be able to conduct, document, and report the examination and testing of a firearm. **Comment deadline December 30, 2019.**
- [ASB 126, Best Practice Recommendation for Casting Footwear and Tire Impression Evidence at the Crime Scene](#). This new document provides best practice recommendations for casting of footwear and tire impression evidence by appropriate personnel. Following the recommendations described in this document should result in the optimal recovery of impressions. **Comment deadline January 13, 2020.**

For the ASB documents listed above, download the [comment template](#) and return it to asb@aafs.org by the comment deadline.

New Work Proposals for New or Revised Standards

The following documents are being initiated and are expected to result in a new or revised standard.

ASB:

- On November 15, 2019, a [Project Initiation Notification System \(PINS\)](#) was published on page 17 in the *ANSI Standards Action*. This will begin a 30-day period for public comment on the initiation of ASB's work on the following documents:
 - BSR/ASB BPR 129-202x, Best Practice Recommendations for Internal Validation of Human Short Tandem Repeat Profiling on Capillary Electrophoresis Platforms. This new document provides best practice recommendations for performing an internal validation of a human short tandem repeat (STR) multiplex kit using capillary electrophoresis (CE). This document is to be used as a companion document to the ASB Standard 39, Standard for Internal Validation of Human Short Tandem Repeat Profiling on Capillary Electrophoresis Platforms.
 - BSR/ASB Std 134-201x, Standard for Identifying and Describing Pathological Conditions and Anomalies in Forensic Anthropology. This new standard provides techniques and approaches for describing and/or conducting a differential diagnosis of pathological conditions and anomalies from skeletal material and/or radiographic images.

Contact Teresa Ambrosius (tambrosius@aafs.org) for more information on the proposed ASB documents or to submit your comments.

Other News

ADA forensic dentistry standard created after 9/11 added to federal registry

Versaci, M. (2019, November 15). ADA News. Retrieved from <https://www.ada.org/en/publications/ada-news/2019-archive/november/ada-forensic-dentistry-standard-created-after-9-11-added-to-federal-registry>



An update from the Organization of Scientific Area Committees

(2019 November). The ISHI Report. Retrieved from: <https://promega.foleon.com/theishireport/november-2019/the-organization-of-scientific-area-committees-osac-update/>

Crime Scene Photography

(2019 November/December). ASTM Standardization News (page 8). Retrieved from: http://www.standardizationnews.com/standardizationnews/november_december_2019/MobilePagedReplica.action?pm=2&folio=Cover#pg1

Facial Recognition Code of Ethics

David (2019, November 22). Rank One's Face Recognition Blog. Retrieved from: <https://blog.rankone.io/2019/11/22/facial-recognition-code-of-ethics/>

Two DNA Standards Considered for Registry

(2019, November 12). Evidence Technology Magazine. Retrieved from: http://www.evidencemagazine.com/index.php?option=com_content&task=view&id=2962

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Consider being a part of the Iowa IAI:

Articles: Have you written an article or is there a particular article that you have found extremely helpful? We would love to include it in our website as a resource for other members. We are also looking for feature articles to include in our bi-annual newsletter.

Websites/Resources: Are there any particular websites or online training resources that you utilize and find helpful? Send us a link and we will share them with our members.

Job Listings: Is your agency hiring? We offer free job listings to our member's agencies. Just send a brief description and link and we will include it on our page.

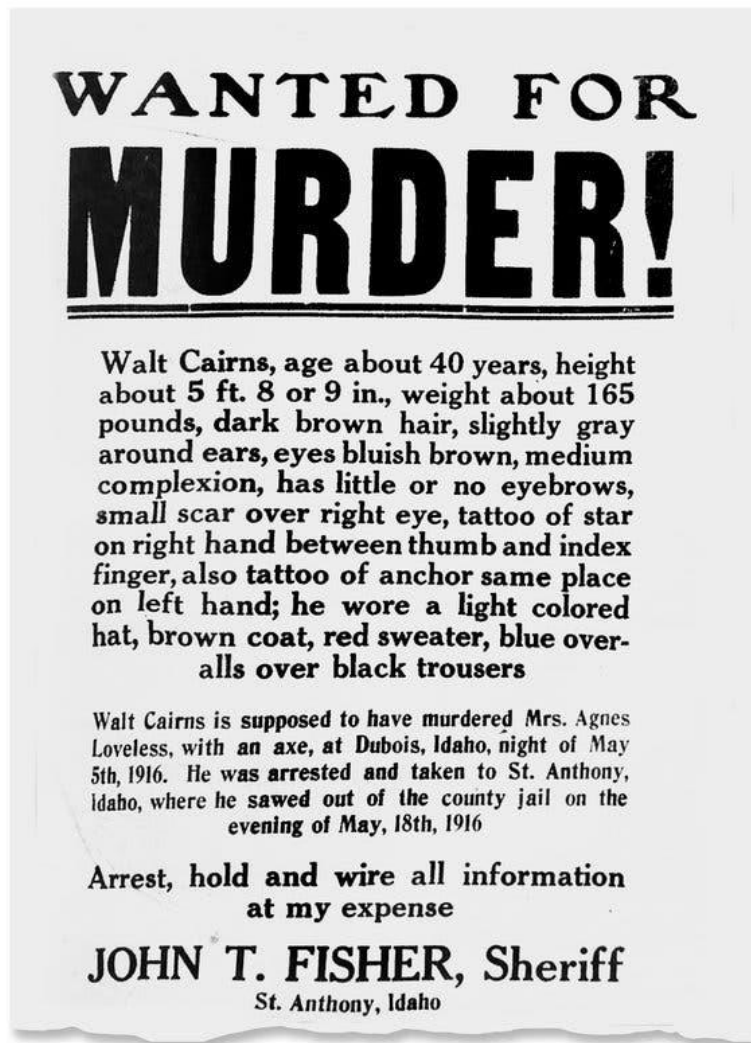
Training: Quality training is hard to find in the Midwest at times. If your agency is hosting a training or class and there are seats available we would appreciate the opportunity to share it with our members.

If you would like to participate in any of the above topics or have suggestions for any additional topics or items you would like to have added to our website, please contact the editor at: Editor@iowaiai.org

Headless Body in Cave Is Identified as 1916 Ax Murder Suspect

By [Heather Murphy](#)

The case of Joseph Henry Loveless, who sawed his way out of jail in 1916, is among the oldest solved using genetic genealogy.



A wanted poster for Joseph Henry Loveless, who used many aliases, including Walt Cairns. Credit...Historical Museum at Fort Missoula/DNA Doe Project

In the spring of 1916, a bootlegger in Idaho escaped from jail by hiding a saw in his shoe and using it to cut his way out of his cell. A few months later, the man murdered his common law wife by “beating her brains out with an ax,” according to a local newspaper.

At her funeral, one of his children told a reporter, “Papa never stayed in jail very long and he’ll soon be out.” A couple of weeks later, he did it again, escaping from yet another jail with the old saw-in-the-boot trick. This week, more than a century later, officials in Clark County, Idaho, announced that Joseph Henry Loveless, the bootlegging escape artist, had been found. Of course, he is long dead. And it had been years since anyone was actively looking for him.

But in solving one mystery, investigators helped solve another. Since 1979, the authorities in Idaho had been trying to identify a torso that had been stuffed in a burlap sack in a cave. Now, they have learned that the torso belongs to Loveless.

Given that the bootlegger appears to have died in 1916, his case is almost certainly the oldest to be cracked with forensic genealogy, a rapidly expanding forensic technique that uses individuals’ relatives in genealogy databases to identify human remains and crime scene DNA.

“He died 103 years ago; he was born in 1870,” said Anthony Lukas Redgrave, a team leader for the DNA Doe Project, an organization that works with law enforcement to identify unclaimed remains. “It’s absolutely the oldest ID we’ve ever made.”



The mystery of the remains began on Aug. 26, 1979, according to the DNA Doe Project, when a family hunting for arrowheads discovered a man’s headless torso buried in a shallow grave within a network of volcanic caves in eastern Idaho.

On March 30, 1991, an 11-year-old girl exploring in the same cave system came across a mummified hand. Excavating the surrounding area for additional clues, officials later found an arm and two legs wrapped in burlap.

Researchers and students from Idaho State University spent months searching for his head, but it never turned up. Last year they began working with the DNA Doe Project to try to identify the remains from a piece of the tibia, a long leg bone.

The DNA was high quality - unusual for so old a sample, according to Justin Loe of Full Genomes, a genetic services company involved in the case. He suspects that may have to do with the conditions in the volcanic cave.

Samantha Blatt, a bioarcheologist at [Idaho State University](#), said the temperature of the cave sand— around 37 Fahrenheit — might have contributed to the fact that the mummified remains retained an odor of decomposition, which was rare after so many years. Also, his sock was almost perfectly preserved.

“It’s a complete sock,” she said. “It looks like it could be from my house.”

After uploading a profile to various DNA databases, genetic genealogists began looking for relatives. Beyond DNA matches and relatives’ family trees, the clue that proved most critical was a wanted poster, Mr. Redgrave said. The clothes he was wearing when he escaped — a “light colored hat, brown coat, red sweater, blue overalls over black trousers” — were an exact match for the clothes found on “Clark County John Doe,” he said.

To confirm their hypothesis, the genealogists needed a close relative. After several months, the Clark County Sheriff’s Department in Dubois, Idaho, located the bootlegger’s 87-year-old grandson. A deputy drove to California to ask him to take a DNA test. The man agreed, and the test confirmed that the remains belonged to his grandfather.

Investigators did not know why Loveless was killed and buried in the cave, but Dr. Blatt had a theory: revenge. Shortly after he broke out of jail, his wife’s family came to retrieve her body, meaning they were in the area at the time of his death. Given that most everyone thought Loveless was responsible for his wife’s grisly slaughter, her family might have dismembered him as payback, she said.

Over the past two years, a growing number of law enforcement agencies have turned to genetic genealogy to identify human remains and solve other crimes. One of many questions that have been raised around this contentious practice is why some cases get the special treatment — involving dozens of volunteers, costly external contractors and special law enforcement resources — while others don’t.

Mr. Redgrave pointed out that when they began, they had no idea what kind of person they were identifying or when he died. “Everyone matters,” he said. “That’s the point.” The Clark County Sheriff’s Department is now investigating Loveless’s 1916 murder. The saw he used to escape from jail had yet to be found.

Heather Murphy is a general assignment reporter who often writes about advances in DNA technology.
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