



Crime Scene

Winter 2012

Volume 38, Issue 1



*Start Your NWA's
New Year
With a Bang!*



January 2012

N W A F S N E W S L E T T E R

Editor's Message

Well, another new year is upon us! Many people take this opportunity to make resolutions. Conversations during this time discuss how things are now going to be different and new. My typical view of a new year is that of a marking point; ending one year and beginning the next. I have never woken up on January 1st in my brand new mansion. Nor have I gone back to work after this holiday and had all of the cases that I was working on before the break be done and completed - that case file that I had on my desk is still in the exact same place that I left it. But, this year I am making a resolution: *to use this whole year to celebrate the organization's 40th anniversary and help prepare for 40 more!*

This is a year packed of NWAFS things to do. First, this newsletter will hopefully refresh your memory of the Tacoma meeting. For those that didn't attend you can learn of some of the happenings. Second, the board is planning the upcoming Missoula meeting. Already there are some great workshop ideas and plans. Third, I welcome our new NWAFS members. For our NWAFS members, please take some time and welcome these new members. And finally, try and get involved now! This is truly going to be an especially wonderful year for our organization as we are celebrating our 40th anniversary, so be part of it by participating such as dropping me an idea, comment or just attending our Missoula celebration. If you do, you will be amazed at what happens, not just at a meeting but throughout the year.



*Thank you,
Jeff Jagmin*

About the Newsletter...

Crime Scene is the official publication of the Northwest Association of Forensic Scientists. It is published 4 times a year in the months of January, April, July, and October. The Newsletter welcomes submissions from its membership such as technical tips, case studies, literature compilations, workshop or training notifications, reference citations, commentary, historical accounts, and other topics of interest to the membership. The views expressed in articles contained in this publication do not necessarily represent the views of the Northwest Association of Forensic Scientists. The Association neither guarantees, warrants, nor endorses these views or techniques but offers these articles as information to the membership.

Please submit material for publication in Microsoft Word for Windows format as an e-mail attachment or on compact disk (CD). All technical material will be subject to peer review by NWAFS members. Requests for permission of any material contained in this newsletter may be addressed to the editor. Requests, or questions, of technical submissions will be directed to the originating author. For more information regarding the Newsletter contact:

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NWAFS OFFICERS for 2011 - 2012

Executive Committee

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Vice-President	Chris Hamburg Oregon State Police Chris.Hamburg@state.or.us
Member-at-Large	Kathy Kittell Oregon State Police Kathleen.Kittell@state.or.us

Secretaries

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PRESIDENT'S MESSAGE

January 2012

Hello 2012. I can't understand what Office Depot knows that the Mayans didn't know but my calendar goes all the way to the end of the year-let's make the most of it!

This message finds the Board busily working toward assembling a program for Missoula the week of September 23, 2012. We are actively considering a wide range of training topics but still need your help as an instructor or suggesting a can't miss topic. Among the topics being considered are:

- **Practical Accelerant Detection for Investigators and Chemists**
- **Forensic Evaluation of Long Range Ballistics**
- **Ethics-vs-Incompetence: Understanding the Difference**
- **Current Court Cases in Forensic Science and the NAS Report**
- **Hi Speed Video—How Things Break**
- **HandHeld XRF: Forensic Applications of the Innov-X System**
- **Jury Selection-Do you Know your Audience**
- **Using Adobe® PhotoShop® as an Evidence Screening Tool**
- **Basic Understanding of Bloodstain Pattern Analysis for the Bench Scientist**
- **Microscopy for the Non-Microscopist**
- **Common defense tactics used in breath alcohol testing and how to address them**
- **Synthetic Cannabinoids and Specialized Designer Chemicals**

As you may be aware, this is the first time the Board has acted as the host for the conference and we are doing all of the planning remotely. This conference will mark the NWAFS 40th year and you should make every effort to attend. Check in with the web site often to get the latest updates and start planning now to attend the conference in Missoula, MT the week of September 23, 2012.

Once again we hope to offer the "Special Research Workshops" where NWAFS provides the basic materials for some simple, one day research and the participants present their observations at the general session and publish their work in the NWAFS publication. If you would like to mentor a workshop, or have a good idea for a one day project, email the ideas to a Board member and we'll try to get them on the program. This is a great way to get that first presentation under your belt or bring that great idea that's been sitting on your note pad back to life.

Start thinking now about that interesting case you worked over the last few months. While the case is fresh in your mind and the materials available, I hope you'll consider presenting your work at the meeting in Missoula. Remember, what may be routine to you might be cutting edge for others. Scientists present and publish their work so that others may further advance the knowledge base. As a forensic scientist, you have a responsibility to participate in the scientific community and I hope you will consider contributing to the NWAFS program. Thank You

Matthew Noedel, President NWAFS
mnoedel@att.net 253-227-5880



Asked & Answered

Search tips from a forensic library

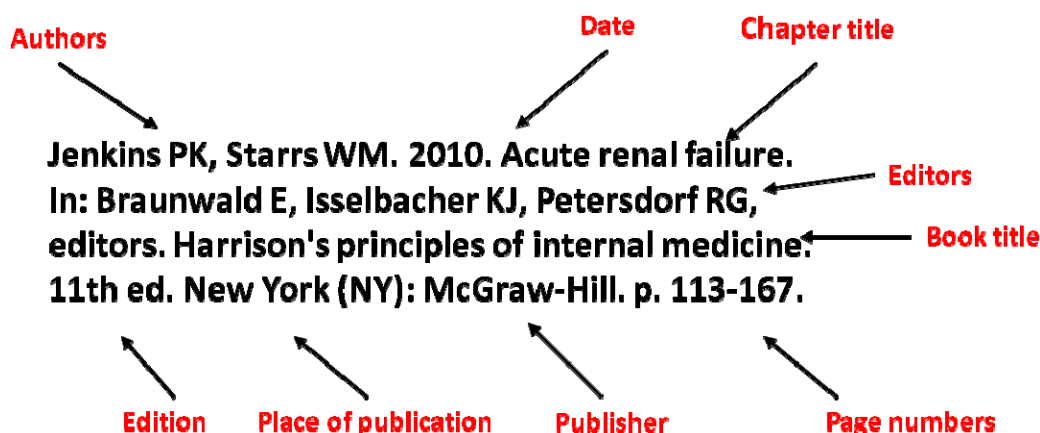
Jeff Teitelbaum, MLIS | Forensic Library Services

Forensic Laboratory Services Bureau

Washington State Patrol / Seattle Washington

Jeff.Teitelbaum@wsp.wa.gov

Citing References - Part 1



Providing a list of reference citations is an essential component of any scientific or scholarly paper. These citations are intended to assure the reader that the material contained in the article comes from credible sources, as well as providing highly relevant leads which the reader can pursue in order to learn more about the subject.

There are, however, a multitude of citation formats from which to choose, and this can make the formatting process confusing and time-consuming. Added to this is the fact that nearly every journal requires their authors to conform to their own specific format, which results in hundreds of different formatting styles. The majority of these specific journal formats are really just variations of the four primary formatting styles:

- **MLA** style (Modern Language Association)
 - Primary use: Humanities
- **APA** style (American Psychological Association)
 - Primary use: Social and behavioral sciences
- **Chicago** style (Chicago Manual of Style)
 - Primary use: Overall American English grammar, formatting, usage, etc.
- **CSE** style (Council of Science Editors)
 - Primary use: Natural and physical sciences

Since this column is intended for a forensic science publication, it is hoped that readers may find useful a rundown of the various formats advocated by the CSE style. An exhaustive (and exhausting) amount of material about this style is described in **Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers**, a book which is now in its seventh edition. The book is definitely not easy to navigate, which is why it might be more convenient to have the following reference formats to use as a handy guide:

CSE Style Format Guide

Book

Format:

Author(s). Date. Title. Edition. Place of publication: publisher.

Example:

Samuel J, Garriott M. 2008. Courtroom techniques: a practical guide. 2nd ed. Boston (MA).

Book chapter

Format:

Author(s) of the Part. Date. Title of the part. In: Book's Author(s) or Editor(s). Title of the book. Edition. Place of publication: Publisher. Page numbers of the part.

Example:

Jenkins PK, Starrs WM. 2010. Acute renal failure. In: Braunwald E, Isselbacher KJ, Petersdorf RG, editors. Harrison's principles of internal medicine. 11th ed. New York (NY): McGraw-Hill. p. 113-167.

Conference proceedings

Format:

Editor(s). Date published. Title of the book. Name of the conference; Date of the conference; Location of the

Example:

Lambris JD. 2007. Current topics in inmate psychology. Proceedings from the 5th International Conference on Inmate Psychology; 2006 Jun 4-9; Corfu, Greece.

E-mail, personal communication, other unpublished material

CSE recommends placing references to personal communications such as letters, conversations, lectures, and presentations within the running text, not as formal references.

Make sure that you have permission from the cited person or organization and include that in a “notes” section that follows the text of the paper which may include additional information such as the reason for the communication.

Example: ...and most of these meningiomas proved to be inoperable (2003 letter from RS Grant to me; unreferenced, see “Notes”) while a few were not.

Journal article**Format:**

Author(s). Date. Article title. Abbreviated Journal Name. Volume(issue):Page numbers.

Example:

Smart N, Fang ZY, Marwick TH. 2003. A practical guide to exercise training for heart failure patients. J Card Fail. 9(1):49-58.

Technical report**Format:**

Author(s). Date. Title. Edition. Place of publication: publisher. Report number or Contract number or Grant Number if given. Available from: Source and its Location; Order number. Sponsored by Name of Sponsor if given.

Example:

Castella PJ, Wiggins RM. 1989. Human factors nuclear safety. Washington (DC): National Academy Press. Contract No.: NRC-33-06-443. Available from: NTIS, Pittsburgh, PA; PB89-175517. Sponsored by the National Safety Council.

Website**Format:**

Title of the Homepage [Internet]. Date of publication. Edition. Place of publication: publisher; [Date updated if given; date viewed]. Available from: URL

Example:

Careers in computer sciences [Internet]. 2008. Washington (DC): American Association of Computer Sciences; [cited 2010 Dec 5]. Available from: <http://www.aibs.org/careers>

Citing a digital source, such as a website, or a page from a website, comes with some problematic consequences; namely, that a website might be altered or inactive even by the time your article is published. One study (Dellavalle 2003) found that 13% of Internet sources cited in published journal articles were completely inactive after only 27 months. Or the page had changed, so that a reader would see something other than what the author had seen.

A nonprofit preservation organization called **WebCite** (www.webcitation.org) can rectify this situation by archiving individual web pages, and it has become the accepted resource by a growing number of scholarly and scientific authors. WebCite is a free service and does not even require registering; you simply enter the URL for the web page you want to cite, and WebCite will archive the page and provide you with a new URL to use in your references. You will now have a stable and retrievable web page for your readers.

In summary

When preparing to submit an article for publication, you will ultimately need to customize your references to comply with the specific journal's guidelines. But if your topic concerns some aspect of the forensic sciences, the guidelines will, in all likelihood, be some variation on the CSE citation style. It is reasonable, therefore, to have some familiarity with the official CSE guidelines, and the formats provided in this column should provide some solid footing. The forthcoming Part 2 of **Citing References** will examine "in-text" and "end reference" formats.

References

Council of Science Editors. 2010. Scientific Style and format: the CSE manual for authors, editors, and publishers. 7th ed. Renton (VA): Rockefeller University Press.

Dellavalle RP, Hester EJ, Heilig LF, Drake AL, Kuntzman JW, Graber M et al. 2003. Going, going, gone: lost internet references. Science. 302:787-8.

Eysenbach G, Trudel M. 2005. Going, going, still there: using the webcite service to permanently archive cited web pages. J Med Internet Res. 7(5):e60.

WebCite [Internet]. 2011. Toronto, Ontario; [cited 2011 Dec 14]. Available from: <http://www.webcitation.org>

Jeff Teitelbaum

December 15, 2011

Jeff.Teitelbaum@wsp.wa.gov

**Now that you learned
more about writing an
article, write something
for the NWAFS newsletter!**

Do you need some help keeping up with forensic science literature?

Here is a great resource for you!

You are invited to take advantage of an outstanding no-cost opportunity to improve awareness of developments and discoveries in the forensic sciences. Jeff Teitelbaum is one of very few professional librarians in the world specializing in forensic science information resources. Jeff is the librarian at the Washington State Patrol Crime Laboratory in Seattle, and has amassed a unique collection of forensic science resources. One of the services he offers, at no charge to the forensic science community, is distribution of the Tables of Content (TOC's) for a variety of forensic science journals, as well as alerts about new government reports, databases and websites, and other resources that pertain to the forensic sciences.

Journals monitored include:

- Journal of Forensic Sciences
- Journal of Analytical Toxicology
- Forensic Science International
- Forensic Toxicology
- Science & Justice
- USDOJ Reports
- FBI Microgram Bulletin
- Journal of Forensic and Legal Medicine
- Journal of Forensic Identification
- Traffic Injury Prevention
- ...and many others.

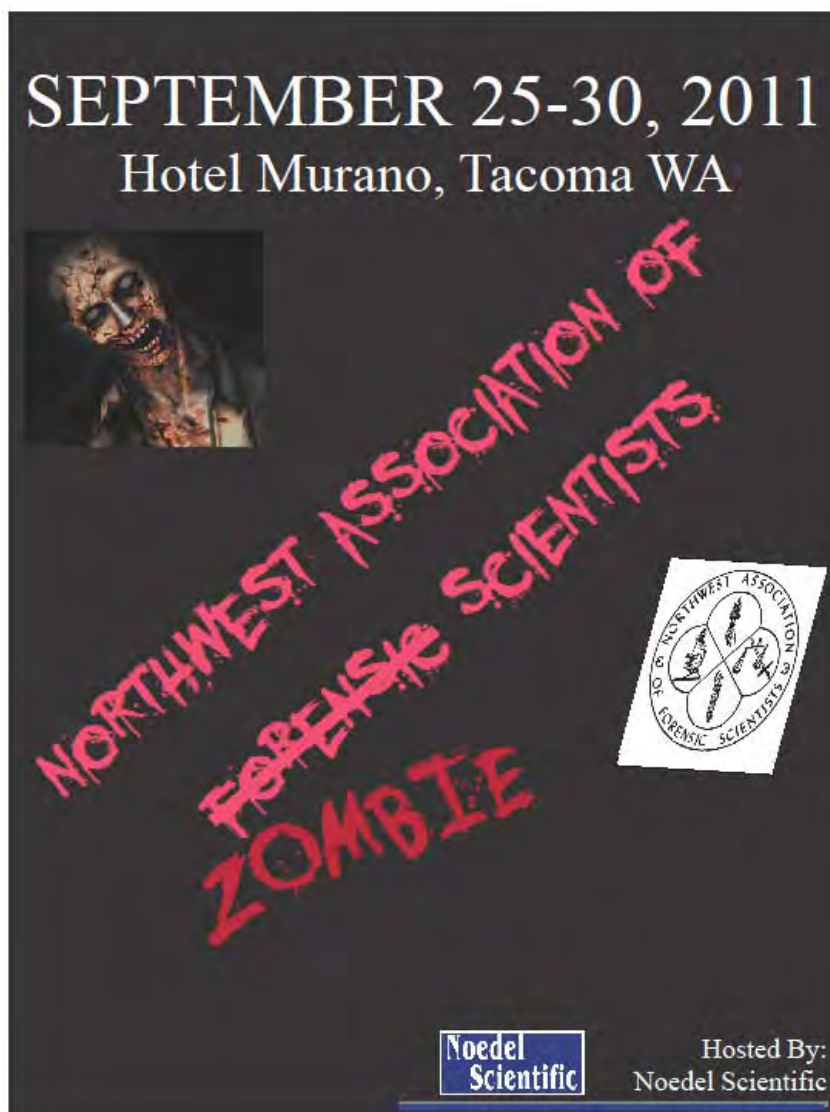


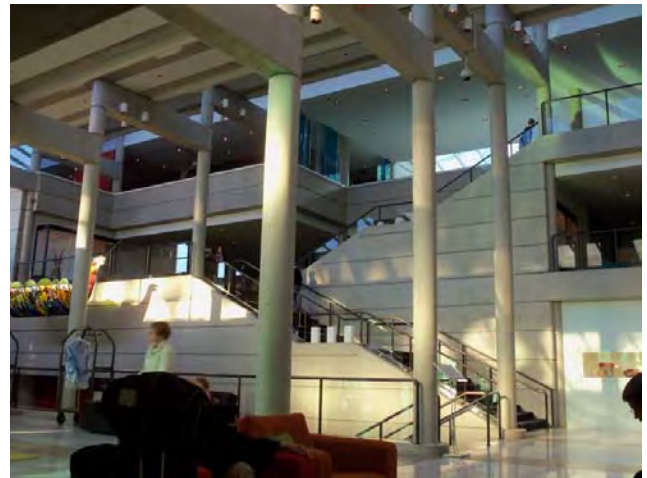
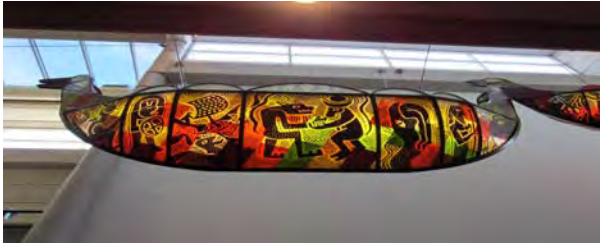
To receive these alerts please contact Jeff directly at jeff.teitelbaum@wsp.wa.gov.

Jeff Teitelbaum, MLIS | Forensic Science Library Services
Forensic Laboratory Services Bureau
Washington State Patrol

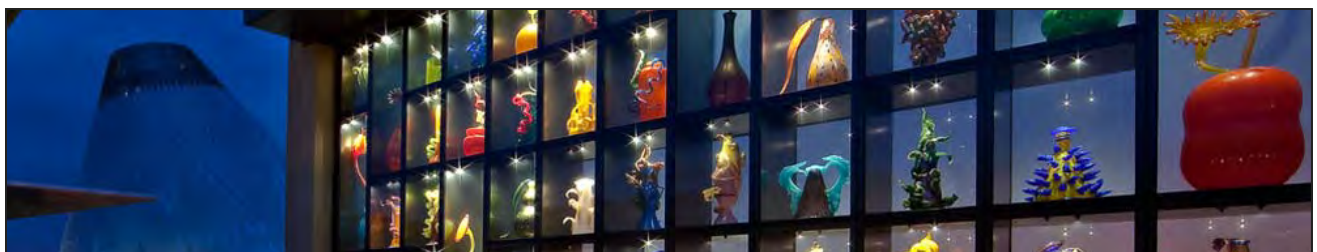
2203 Airport Way S * Seattle WA 98134 * 206.262.6027

A Look at the 2011 NWAFS Tacoma Meeting





MUSEUM OF GLASS



NWAFS Board Meeting Minutes--Tacoma, WA September 29, 2011

Notes recorded by Heather Campbell

Board of Directors

President: Matthew Noedel

Vice President: Dan Alessio

Member-at-Large: Chris Hamburg

Secretary/Treasurer: Heather Campbell

Editor: Jeff Jagmin

Technical Resources Secretary: Trevor Allen

Membership Secretary: Corinna Owsley (Absent)

Meeting called to order at 8:06 am

BOARD MEMBER REPORTS

Member-At-Large: Chris Hamburg

Working on meeting sites, working with Helms-Briscoe

- 2012 Missoula, MT
- 2013 Meeting site?? Put announcement in newsletter looking for someone to step up
Need to pin this down, discussed problems with IAI, will decide as a board where the meeting will be if no one steps up
- 2014 Reno host, joint with CAC
No hotel yet or specific timelines, they have a good planning manual
Trying to determine who takes the lead

Technical Resources Secretary: Trevor Allen

- Has had one request from Army Lab to have a DNA mixture class at meeting
- WSP would like to work with Caymen Chemical, possibly work out a deal with them (since Cayman currently has no GC/MS) to run standards and create data base with them
- Hotel visits for 2012 meeting in Missoula (\$87/nite govt rate)
Holiday Inn—Trevor's pick--Better location of hospitality suite, airport transportation + anywhere in city, free parking, willing to set up a brewery tour/ football game or something, have had a stolen laptop in the past
Double Tree—Hospitality suite on floor area, open to pool (poor location), free parking, shuttle to/from airport

Vice President: Dan Alessio

- Helped Chris pick hotel site
- Email glitch with Noedel's email address
- Wants to stick with his agreement of only stepping in for 2011, wants new faces

Membership Secretary: Corinna Owsley (Presented by Heather Campbell)

- Have 11 new members and 8 members moving from Provisional to Regular members to vote on
- No Life Member applicants
- Supplied the updated Constitution in the 30 day time frame required, wants to thank the Constitution Upgrade Committee for all their help

Secretary/Treasurer: Heather Campbell

- Gave overview of financial statements
- Obtained approval to get new laptops for Heather and Corinna, possible software (discussed possibility to purchase only one now since both in same lab, will confer with Jagmin on what to purchase)
- Was asked about the ability to get books off old laptop, will do this
- Asked about a 3 member committee to audit/review the books, Jagmin doesn't think we need a committee since we amended the constitution

Editor: Jeff Jagmin

- Propose Jeff Teitelbaum be considered as an associate member, big contributor to our association, would like him to be NWAFS librarian
- Strongmen/McDermot "Explosives Devices" best paper, picked 2 authors, accept this year, give them both free registration, will reword to say "Lead Author"
- YMLP 2500 emails, 83 open, 235 email list, 282 on Corinna's list
- How do we address an unsubscribed member, decision was to unsubscribe them
- Board to use YMLP account
- Latest journal included a table of contents, non-members forum, what's going on Discussion of putting Table of Contents onto website so people can see what we are having published
- Revisit the tabled discussion at the 2010 meeting regarding opening up the newsletter to everyone, not just members paying their \$30 dues

Meeting closed at 9:00 am by President Matt Noedel

2011 Meeting Technical Abstracts

Burning Blue Jeans and t-shirts: Microscopic and Chemical Markers of Cellulose Pyrolysis

Chesterene Cwiklik & Matthew Dean- Cwiklik & Associates-Seattle, WA

When cotton and other cellulosic fabrics are burnt or exposed to high heat, the pyrolysis products include char, ash, mineral residues including white and light-colored microspheres, black hollow microspheres/microspheroids and an amber-to-brown viscous material. The hollow black microspheres have not been previously reported. Viscous amber beads have been reported only as ultramicroscopic droplets in aerosols from forest fires (ours can be seen with a stereomicroscope). We propose the black microspheres, amber droplets, and sticky amber residue of the same composition as markers of cellulose combustion that can be used in forensic science casework. We have produced amber aerosols experimentally and have consistently obtained the marker particles from test fires. The amber material is primarily levoglucosan (1,6-anhydro- β -D-glucose), a known pyrolysis product of cellulose combustion.

We tested fabrics other than cotton - rayon and linen also produce the amber droplets when burned; tested sources of levoglucosan other than cellulose, and tested amber droplets that do not contain levoglucosan. We also examined the residues of fireplace fires and a beach bonfire for evidence of microspheres and sticky residues. Cotton shirts on manikins were exposed to a "bonfire" of blue jeans and t-shirts. We could not see amber residues on the shirts, but did obtain it on tape lifts.

Review of the NWAFFS Research Workshop I: Examination of Clearcoats

Dr. Paul Martin, CRAIC Technologies; Steven Stone, WSP Crime Lab-Seattle, WA; Ron Wojciechowski, WSP Crime Lab-Tacoma, WA; Margaret Barber, WSP Crime Lab-Seattle, WA

NWAFFS research workshops are a new style of workshop where the participants have one day to generate data and conduct research on relatively small projects. This review outlines the goals, methods and preliminary findings generated during the research conducted by this group.

Review of the NWAFFS Research Workshop II: Exam of Bullet Damage Through Clothing

*Matthew Noedel, Noedel Scientific; Chesterene Cwiklik, Cwiklik & Associates-Seattle, WA
Lisa Haakenstad, Seattle Police Department-Seattle, WA*

NWAFFS research workshops are a new style of workshop where the participants have one day to generate data and conduct research on relatively small projects. This review outlines the goals, methods and preliminary findings generated during the research conducted by this group.

Effects of concentrating low level DNA forensic case samples on STR analysis

Anna Wilson- Washington State Patrol Crime Laboratory-Cheney, WA

Low level DNA samples that require concentration before short tandem repeat (STR) analysis are typical in forensic casework. Some concentration methods can result in sample loss or poor amplification of STR loci, leading to false negatives where profiles might have been obtained otherwise. Therefore, investigation into a valid and reproducible technique that addresses these issues is warranted. Several reference samples were diluted to low level amounts and concentrated with Vacufuge or Microcon methods with and without Biomatrix® DNASTable Sample Matrix (DNASTable). Additionally, some samples were concentrated with twice the amount of Tris-EDTA (TE) buffer to observe any inhibitory effects increased salt concentrations may cause. Samples containing DNASTable using either concentration method showed the least amount of DNA loss, while samples with increased TE concentration (10X) showed decreased peak heights after amplification with Identifiler Plus. Based on these results, the use of DNASTable is suggested when concentrating low level DNA samples. The Microcon concentration method is also suggested when DNA samples must be concentrated more than 5x.

Forensic DNA Analysis of Marine Fish and Wildlife

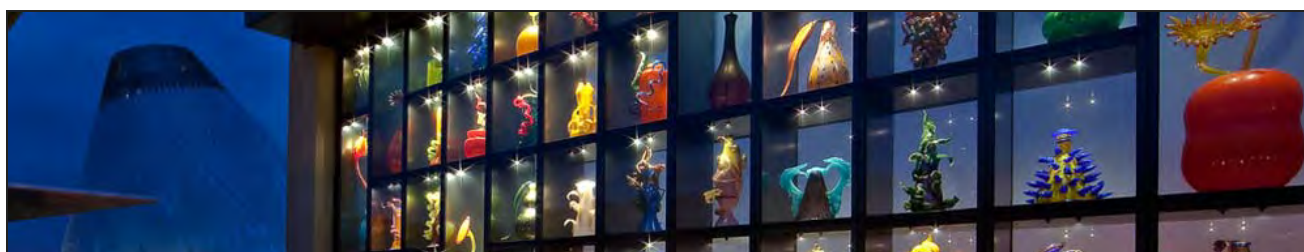
Piper Schwenke-NOAA Fisheries, Northwest Fisheries Science Center-Seattle, WA 98112

For the past twelve years, the Northwest Fisheries Science Center Forensic Unit has provided forensic genetic analyses for NOAA Fisheries during various criminal and civil investigations. Although most of our cases involve salmon listed on the Endangered Species Act (ESA), over the years we have incorporated new capabilities to meet the changing needs of NOAA OLE from seafood mislabeling cases (Lacey Act) to seal and dolphin identification (Marine Mammal Protection Act). I will present case examples which involve forensic DNA identification of endangered Steelhead eggs, 160,000 pounds of mislabeled salmon, and illegally imported seal bacula.

Fired Bullet Impact Site Evaluation: Tumbling Bullet versus Angled Shot

Matthew Noedel, Noedel Scientific Puyallup, WA

Evaluating a bullet impact site can offer useful reconstruction information. This case report outlines the visual differences that may be revealed when attempting to differentiate between a bullet that is tumbling from one that has entered at an angle. The value of considering bullet impact sites are exemplified in the case scenario presented.



3D Topographic Identification of Fired Bullets and Cartridge Cases; the Unification of Microscopic and Mathematical Comparisons

*Robert M. Thompson, BS, D-ABC-Program Manager – Forensic Data Systems
NIST Law Enforcement Standards Office (OLEs) Gaithersburg, MD 20899
Robert.M.Thompson@nist.gov*

Methodology: A Topography Measurement and Correlation System was developed at NIST for certification of NIST Standard Reference Material (SRM) 2460/2461 Bullets and Cartridge Cases. The 3D topography data of the land engraved areas (LEAs) of fired bullets are captured by a commercial Nipkow disc confocal microscope. A modified 3D micro-topography data on the remaining “valid correlation areas” are compressed into a 2D profile which represents the 2D ballistics signature of the LEA. A correlation program using two methods has been developed for matching the paired profile signatures: the “CMS” (Consecutive Matching Striae) method used by many firearm examiners and the CCFmax (cross correlation function maximum) method developed by NIST based on analysis methods in surface metrology.

Cartridge cases that comprised test fires from ten (10) consecutively manufactured pistol slides, fifteen (15) unknown cases, and five (5) “persistence study” cases examined and measured. The cases were microscopically examined. A Nipkow disc confocal microscope was used to gather the 3D topography data from the breech face area of each case. The software applied the cross correlation algorithm to quantify the similarity between two cases.

Results: 20 known-matching bullets fired from 10 consecutively manufactured barrels were tested. The correlation result was excellent: correlation values of all ten pairs of known-matching bullets scored highest on all correlation lists, yielding a correct identification rate of 100%. For the 60 pairs of matched LEAs (each bullet includes six LEAs), correlation values of matching LEAs scored highest on 59 out of 60 correlation lists, yielding a correct identification rate for individual LEAs of 98.3 %. An additional set of 15 unknown matching bullets fired from the same set of 10 barrels was blind tested. These bullets were correlated with the 20 known-matching bullets mentioned above. Both the CCF and CMS method were used and showed excellent correlation results. When using the CMS method, one matching pair did not meet the selected CMS criterion (3X) for a “match”, and 29 out of 30 pairs of matching bullets were correctly identified, yielding a correct identification rate of 96.7%. When using the CCF method, all 30 pairs of matching bullets scored at the topmost position on their respective correlation lists, yielding a correct identification rate of 100%.

Cartridge cases that comprised test fires from ten (10) consecutively manufactured pistol slides, fifteen (15) unknown cases, and five (5) “persistence study” cases were microscopically examined and the results were confirmed as accurately associating all of the questioned cases back to the correct pistol slide sources.

Using statistical analysis from the known match and known non-match correlations, a baseline cross correlation function (CCF) was established to identify matches. Based on the CCF results, and a statistical analysis of the match and non-match case scores, each of the 19 of the 20 unknown cases were correctly identified to the slides that it came from. One case was not identified back to its original slide and had an “inconclusive” scoring. However, re-acquisition and correlation correctly resulted in the correct slide being identified.

Persistence and Secondary Transfer: Part I: Fluorescent Thief Powder

Chesterene Cwiklik- Cwiklik & Associates-Seattle, WA

The focus of most studies in the forensic literature of transfer, persistence and detection of trace evidence has been primary transfer, i.e., directly from the parent material to an object or person. Studies of secondary - indirect or intermediary - transfer of fibers and hairs have been reported, but not of powders and other fine particulates. This was brought to the author's attention in the course of a literature search for a Daubert hearing on a case involving transfer of a fluorescent "thief powder". After drug-sniffing dog alerted for drugs in a FedEx package, federal agents removed the drugs and substituted look-alikes, spraying the plastic baggie and other packaging with "Clue Spray". Four men were at the delivery address when agents arrived. The agents shone UV light on the men's hands, released the man whose hands were clean, and arrested the others. Our laboratory was asked by defense counsel whether one of the men, who denied handling the drugs, could have Clue Spray powder on his hands for any other reason.

We did a simulation study involving handling a "drug" baggie, handling various objects various objects (Xbox controller, computer mouse and keypad, soft drink can, door knob), then having a "second" person handle the objects with clean hands. Plentiful secondary, tertiary, and even quaternary transfer was detected. This demonstrates that direct contact with a Clue-Sprayed object cannot be inferred from the simple presence of fluorescent powder. However, the pattern of deposit provided more information.

Persistence and Secondary Transfer: Part II: Soil

Keisha Danielle Cook- Cwiklik & Associates-Seattle, WA

An informal study of the persistence of soil and soot deposits was conducted on garments used in a series of clothing examination classes. Pants of different types fiber composition and fabric weave were used. Soil that was rubbed on dry was rapidly lost from nylon and polyester fine twill weave pants, silk pajama pants, and polished cotton pants with a stain-resistant backing, but persisted on acrylic knit sweat pants, cotton denim and cotton corduroy pants - through student and instructor handling for up to five classes. The finer soot deposits persisted on all but the polyester and nylon pants. Soil deposited as a heterogeneous material with a range of particle sizes initially persisted through two classes as its fine particle components before near-complete loss of material. Soil deposited wet or damp was retained on all fabrics as embedded deposits of finer components. This demonstrated the selective loss of particles that is often suspected in casework deposits. We are currently conducting a more formal study that includes a study of post-transfer persistence and secondary transfer, and have demonstrated that soil deposited onto blue jeans by rolling around in the dirt then transfers to upholstery fabric placed on car seats. A person sitting on the car seats wearing clean blue jeans picks up soil on the clean blue jeans. In some trials, the indirect transfer survived motion and activity and could be examined in the lab, and in other trials it did not. Moreover, the finer fraction of a mixed soil deposit can be detected after secondary transfer.

In the Bag: A Case Report

Susan K. Wilson- Washington State Patrol Crime Laboratory-Tacoma, WA

A 2004 murder that occurred in Cook County illustrates the use of a variety of trace evidence to make associations between crime scenes, the victim, and the suspect. In May of 2004, a woman was found in her first floor apartment lying face down in a puddle of blood by her boyfriend. Her arms had been tied behind her back, she had multiple stab wounds, and her throat had been cut. Her upstairs neighbor was developed as a suspect. Information was developed that led detectives and the crime scene team to a garbage cart in an alley approximately 6 miles away from the victim's apartment. Inside the garbage cart was a knotted brown garbage bag that contained among other things, blood stained men's clothing and blood stained rope fragments. The suspect's apartment was searched, and 26 brown garbage bags were collected. The contents of the garbage bag found in the garbage cart, the victim's clothing, reference hair samples from the victim and suspect, rope used to tie the victim up, the garbage bags from the suspect's apartment, and a hair clump outside the suspect's apartment were submitted for trace analysis. The results of trace evidence analysis, a physical match between garbage bags and positive rope, fiber, and hair comparisons, were used to augment findings of the DNA and latent print groups. The types of questions asked during court proceedings reflect the need for better communication of evidential value of trace evidence.

Understanding Airsoft

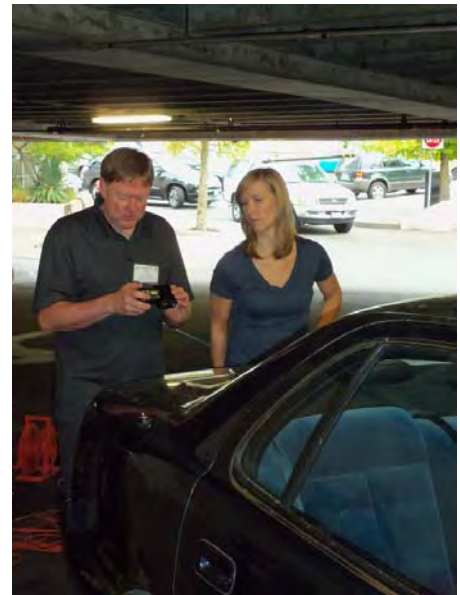
Dan Alessio-Oregon State Police Portland Metro Forensic Laboratory, Clackamas, OR

Airsoft is a sport which continues to grow in popularity both in the United States and worldwide. To target the gaming and Law Enforcement/Military communities, many Airsoft manufacturers produce guns that look and feel identical to the real firearm. The realistic look of the guns creates a potential for conflict with law enforcement. The purpose of this presentation is to provide an overview of Airsoft including history, laws pertaining to Airsoft, Airsoft operating systems and potential for conversion.

Cold Case Investigation: DNA Testing Aided by Crime Scene Photos

Amy Jagmin, Washington State Patrol Crime Laboratory-Seattle, WA

In December of 1968, Sandra (Sandy) Bowman was fatally stabbed in the Seattle apartment that she shared with her husband. Sandy was 16 years old, newly married, and was in her second trimester of pregnancy. Following a review of the case by cold case detectives with the Seattle Police Department, numerous items were submitted to the WSP Seattle Crime Lab for DNA testing. Crime scene photos were also submitted for the DNA scientist to review relative to the DNA testing. This case presentation will demonstrate why communication and cooperation between scientist and detective/investigator are necessary, particularly in working cold case homicides.



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2011 NWAFS Business Meeting Minutes

September 29, 2011

Note Taker Heather Campbell

Board of Directors

President: Matthew Noedel

Vice President: Dan Alessio

Member-at-Large: Chris Hamburg

Secretary/Treasurer: Heather Campbell

Editor: Jeff Jagmin

Technical Resources Secretary: Trevor Allen

Membership Secretary: Corinna Owsley (Not present)

Meeting called to order at 2:30 pm by President Matt Noedel

Voting members required to hold quorum: 14

List of members in attendance made by: Noedel, confirmed by Jagmin: 15

1st order of business: Voting in/moving up new members

Membership Secretary's Report - Corinna Owsley (given by Heather Campbell)

Named off the 11 members applying for **Provisional Regular Membership**

Beau Baggenstoss

Krista Bernadt

Darren Bowles

Sheri Jenkins

Thomas Jones Jr.

Gene Lawrence

Alison Peirce

Caron Pruiett

Heather Pyles

Andrea Ricci

Melissa Simons

WSP Crime Lab, Cheney, WA

DEA Western Lab, San Francisco, CA

Utah BFS, Salt Lake City, UT

WSP Crime Lab, Cheney, WA

OSP Crime Lab, Springfield, OR

WSP Crime Lab, Tulalip, WA

WSP Crime Lab, Cheney, WA

WSP Crime Lab, Vancouver, WA

WSP Crime Lab, Vancouver, WA

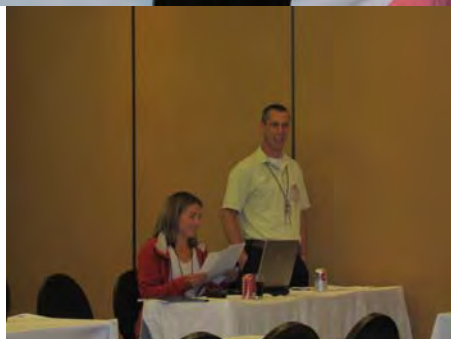
WSP Crime Lab, Kennewick, WA

OSP Crime Lab, Central Point, OR

Motion to accept applicants for Provisional Regular Member made by: Dan Alessio

Motion seconded by: Kori Barnum

Motion passed by unanimous decision



Named off 8 members looking to elevate from **Provisional Regular to Regular** (voting) member

Chrystal Bell	OSP Crime Lab, Clackamas, OR
Jennifer Dahlberg	WSP Crime Lab, Vancouver, WA
Celeste Grover	OSP Crime Lab, Clackamas, OR
Tanis Jimenez	ISP Forensics, Meridian, ID
Kathleen Kittell	OSP Crime Lab, Clackamas, OR
Jillian Lottridge	OSP Crime Lab, Clackamas, OR
Kerry Russell	ISP Forensics, Meridian, ID
Amy Wilson	OSP Crime Lab, Clackamas, OR

Motion to promote Provisional Regular Members to Regular voting members made by: Dan Alesio

Motion seconded by: Kori Barnum

Motion passed by unanimous decision

No Life Member nominations

Resigned Members 2011

Robert Heegle (11/2010)
 Donna Meade (1/2011)
 Steve Taormina (5/2011)
 Donald Chinn (6/24/11)
 John Lundy (6/1/2011)
 Robyn Eustis (5/19/11)

Members terminated 2011 (non-payment of dues)

Christopher Getz	Pima Medical Institute
Marlon Hoyle	King County Police
Kevin Smith	Utah State Crime Lab
Louize Smith	Utah State Crime Lab
Christina Stivers	OSP Crime Lab, Portland

2010 Business Meeting minutes offered for acceptance

Motion to accept 2010 meeting minutes in Portland, OR made by: Jeff Jagmin

Motion seconded by: Robert Merlyn Thompson

Motion passed by unanimous decision

By-Laws/Constitution

Jeff Jagmin commented that the updated By-Laws and Constitution had been sent out by Corinna Owsley and the membership had the allotted 30 days to comment on - no comments were received.

Motion to accept amended By-Laws/Constitution made by: Jeff Jagmin

Motion seconded by: Bill Marshall

Motion passed by unanimous decision

Member-at-Large Report - Chris Hamburg

- 2012 meeting, Missoula, MT, decided by BOD due to lack of anyone coming forward and offering, working with Helms Briscoe
- 2014 meeting, Reno NV, Washoe Co Crime Lab, joint meeting with CAC
- 2013 meeting, looking for any offers?? None from the floor
Brief discussion of the benefit to your lab and low costs
ERICA GRAHAM will look into pursuing 2013 in Vancouver, WA

Technical Resources Report - Trevor Allen

- Received one request by the Army Crime Lab to have a DNA mixture class
- Received one request from the Innocence Project for a copy of a presentation given on the persistence of semen on clothing after being washed
- Hotels for Missoula, MT 2012 meeting
 - ◊ Double Tree power point presentation
 - ◊ Holiday Inn power point presentation *Trevor's choice
 - ◊ Security concern

Motion to accept Holiday Inn as hotel of choice for 2012 meeting hotel made by: Jeff Jagmin

Motion seconded by: Erica Graham

Motion passed by unanimous decision

Editor's Report - Jeff Jagmin

- Published 4 newsletters, electronically
- Established peer review process
 - ◊ Received 2, both went successfully through peer review, discussed peer review process, very in-depth and adequate
- Caption This Winners
 - ◊ Spring: Josh Spatola
 - ◊ Summer: Aaron Brudenell
 - ◊ Winter: Barbara Andree
 - ◊ Fall: Robert Thompson
- Publications committee, consisting of Steven Stone, Amy Jagmin, Susan Russell, Jennifer Malone & Megan Ashton, all doing a great job and very grateful to them
- Purchased Adobe Creative Suite 5.5, will be utilized for upcoming newsletters
- Best Independent Newsletter Submission Contest winners: Mark Strongman & Martin McDermot's paper "Case Report: Improvised Explosive Devices Utilizing a Reaction of 1-Bromo-3-chloro-,5-dimethylhydantoin (BCDMH) with Isopropanol". They both win free registration for the year.
- Table of Contents now in the newsletter, began with Fall 2011
- Comment that ownership of articles is by the author, noted in CrimeScene
- Jeff Jagmin mentioned comment on Jeff Teitelbaum
 - ◊ Gave him kudos as contributor to newsletter
 - ◊ As a librarian, Jeff T. can provide to NWAFS members table of contents
 - ◊ Next newsletter article will be about writing abstracts, web-based references

Editor's Report - Jeff Jagmin continued

- Jagmin recommends making Teitelbaum the NWAFS librarian
 - ◊ Past NWAFS librarian was Drexie Malone, don't know what happened to that
 - ◊ Paying for a year's membership for him to be an associate member (he meets the qualifications)

Noedel's response

- Formal process is for him to apply for Associate Membership
- Once done association could pick up his \$30/year dues as a benefit to us
 - ◊ Jagmin will approach him about applying for membership

Secretary/Treasurer's Report - Heather Campbell

Account Balances (as of 9/20/11)

Chase Business Select Checking	\$27,473.58
Chase Business Select High Yield Savings	\$58,881.01
Dreyfus Liquid Assets Class 1	\$25,765.83
Total	\$112,120.42
Member dues--checks	\$6,350.00
Member dues—Paypal	\$810.00
Total dues	\$7160.00 (\$65 for 2010 dues)

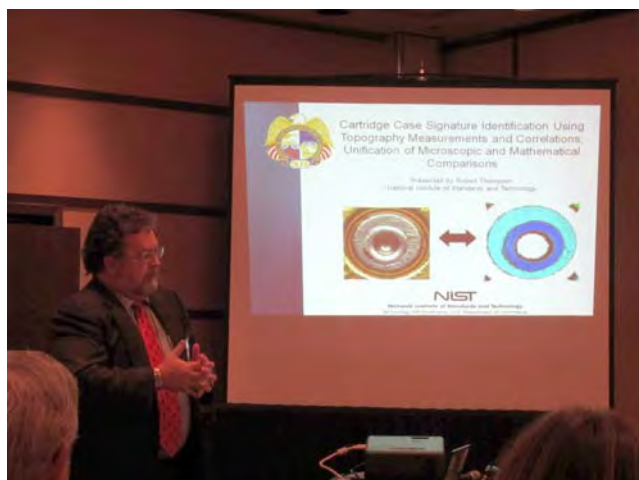
Account	9/20/11	9/30/10	Difference
Chase Business Select Checking	\$27,473.58	\$27,293.11	\$180.47
Chase Business Select High Yield Savings	\$58,881.01	\$48,175.45	\$10705.56
Dreyfus Liquid Assets Class 1	\$25,765.83	\$25,765.83	\$0
Total Assets	\$112,120.42	\$101,234.39*	
\$10,886.03			
		*off \$1609.50	

- Went through financial gains/expenses of organization
 - Question by Robert Thompson about electronic books and if they are backed up. Campbell is currently doing this with the current books. Will look into archiving the Quicken books on the Toshiba (outdated) laptop.

Motion to accept officers' report made by: Jayne Aunan

Motion seconded by: Kevin Jenkins

Motion passed by unanimous decision



Old Business

Discussion of 2010 tabled topic regarding access to newsletters, currently accessible to Members Only, options are to:

Vote to leave as is

Vote to have Table of Contents on website

Vote to have Table of Contents and Abstracts on website

Vote to have newsletter on website, available to anyone

Discussion followed, decision was made that vote would not be necessary and we will discuss with webmaster how things are going to be presented

New business by Matt Noedel

Registered 95 people, close to breaking even, may lose couple thousand dollars
Thanks to WSP for all the people they sent

Promotion of Board Members

President (due to Dan Alessio's situation)

Matt Noedel self nominated

Other nominations: none

Motion to accept Matt Noedel's self nomination to president made by: Jeff Jagmin

Motion seconded by: Dan Alessio

Motion passed by unanimous decision

Vice President

Nomination of Chris Hamburg to promote to Vice-President by Matt Noedel, Hamburg accepted

Other nominations: none

Motion to elevate Chris Hamburg to Vice President made by: Jeff Jagmin

Motion seconded by: William Marshall

Motion passed by unanimous decision

Member-At-Large

Frank Boshears self nominated for Member-At-Large, not present

Other nominations: Dan Alessio nominated Kathy Kittell

Kori Barnum commented and spoke highly of Kittell, described her work ethics

President Noedel asked if everyone was okay with an open voting system rather than doing paper ballots. No objection

Votes for Frank Boshears: 0

Votes for Kittell: 15

Motion to accept Kathy Kittell as Member-At-Large made by: Jeff Jagmin

Motion seconded by: Kori Barnum

Motion passed by unanimous decision

Promotion of Board Members Continued

Membership Secretary

Matt Noedel mentioned we had neglected to vote on the Membership Secretary opening

Motion made to accept Corinna Owsley to remain as membership secretary: Matt Noedel

Motion seconded by: Heather Campbell

Motion passed by unanimous decision

Comments from the floor

Dan Alessio provided clarification of Helms Briscoe, who they are and what they do for us (great, free service) - gave a push for everyone to attend Reno and make a good showing for NWAFS

Erica Graham commented on the request of getting more involvement in organization by younger members

Suggestion of listing committees on website—Ad hoc committees

Kori Barnum suggested they access the website and get in touch with a board member

Heather Campbell discussed login/password of members only area on website, not many people know either one

Suggestion to show current committees on website—can request this of webmaster Borngasser

Dan Alessio suggested getting more committees (as needed)

Matt Noedel brought up the vendors, who provide a lot of money to our organization and they received little face time or support this week and asked for suggestions on how to keep them happy and get a better response

Kori Barnum suggested having speakers during lunch sessions, ie 10 minute product spiel by vendors

Anna Ballard-Smith suggested we have a better Schedule of Events, make more pronounced

Theresa Shenk suggested having DNA people come to talk

Matt Noedel suggested we share lunch table/space with the vendors

Trevor Allen suggested asking the vendor to give us a quick presentation of any equipment you are looking at purchasing

Jeff Jagmin suggested thinking about ideas to incorporate vendors into workshops (mentioned Foster and Freeman's aide with their lighting systems during the OMNI car process)

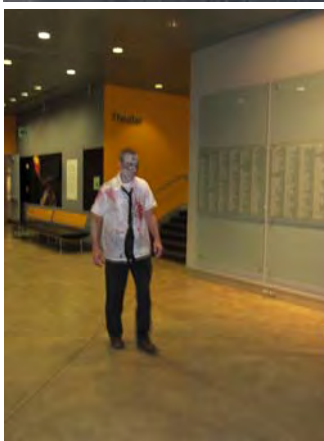
Matt Noedel suggested we close the business meeting

Motion to close the meeting made by: William Marshall

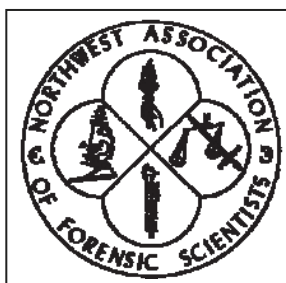
Motion seconded by: Dan Allesio

Motion passed by unanimous decision

Meeting ended at ~ 4:00 pm







NORTHWEST ASSOCIATION OF FORENSIC SCIENTISTS



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SEPTEMBER 23-28, 2012
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CALL FOR PAPERS/PRESENTERS

The NWAFS 2012 general meeting technical session will be held on Thursday and Friday, September 27-28, 2012. The call for papers is now open. If you wish to submit a proposal for a presentation, please complete the form below. Submissions of proposed presentations must be received by August 25, 2012. Each presenter will be allotted 20 minutes; however, special arrangements can be made if additional time is requested in advance.

Presenting Author: _____

Agency/Affiliation _____

Address _____

Phone _____ Email _____

Title of Presentation: _____

Abstract:

Please return the completed form via email (preferred) or mail to:

Jeff Jagmin
WSP Crime Lab-Seattle
2203 Airport Way South Bldg A Suite 250
Seattle, WA 98134-2045
editor@nwafs.org

MEET THE NEWEST NWAFS BOARD MEMBER

Member-at-Large

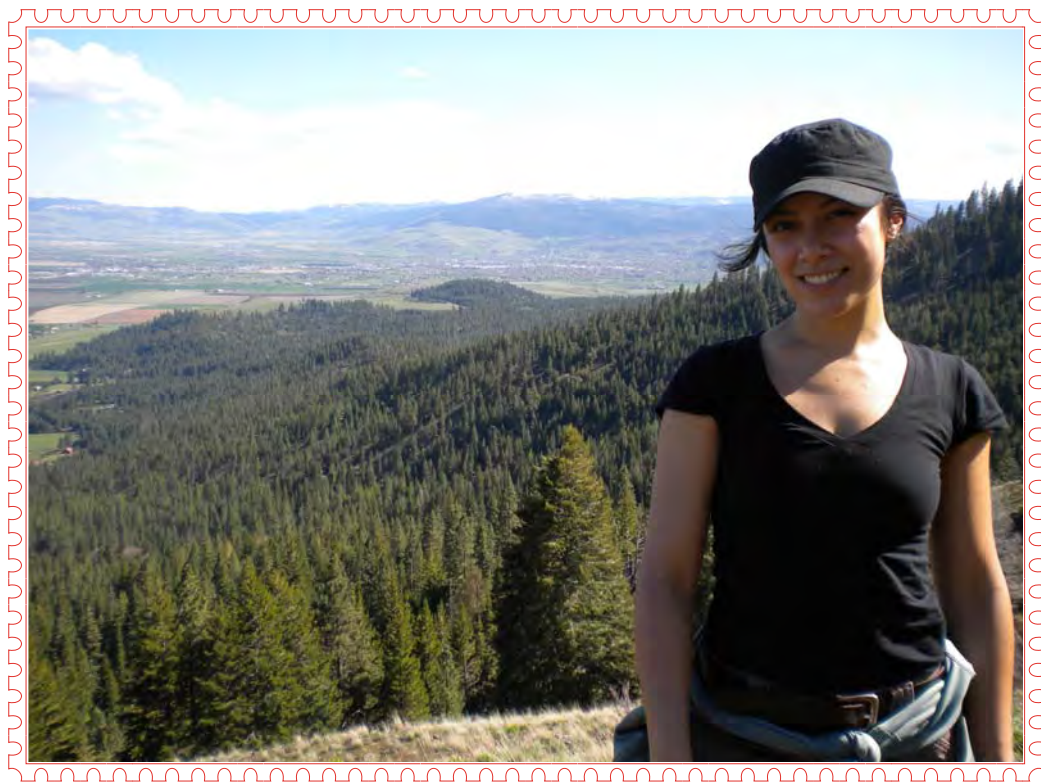
Kathy Kittell

I've considered myself lucky to have found an enjoyable career in Forensic Science so early in life. My high school chemistry teacher did a "little experiment" with our class and gave us the opportunity to choose our own subject for our senior research project. I went to our library and found a book titled "Crime Scene Investigation" that interested me and decided that Forensics would be my topic of choice. Little did I know that one of my little experiments: a 2 liter pop bottle (a make-shift superglue fuming container) would foreshadow my current Forensic specialty! Thanks to that Chemistry teacher, I found the field of Forensic Science and have been intrigued ever since.

I graduated from Carlow University (Pittsburgh, PA) with a BS degree in Chemistry and a Criminal Justice/Sociology minor. Immediately after graduating, I didn't hesitate to find my way back to the West Coast and decided to attend graduate school at the University of California in Davis. During my time there, I got introduced to the wonderful world of Firearms and Tool Marks. I had the great opportunity to meet and be mentored by regional examiners during my coursework and while volunteering at the California Criminalistics Institute and the ATF lab in Walnut Creek. I soon started eyeing jobs related to this field and was hired by OSP to work in the Firearms Section of the Portland Metro laboratory as an IBIS Technician. Life and a career whisked me away from school in California to my current home in Oregon.

I've since worked for OSP for four years. The first two years were spent with "The Boys", as they were affectionately referred to in the Portland Firearms section. I was able to learn a lot while sharing many fun memories with those guys. I then transferred to our Springfield laboratory to become a Forensic Scientist. For the past two years, I've worked as a latent print processing analyst.

During my time with “The Boys”, many tales of past NWAFS meetings echoed off the walls in the Firearms section. This intrigued me enough to become a member in 2008 and to volunteer with the 2010 Portland host committee. If you were at that meeting, I probably handed you your binder and name badge at the registration table! I also got a chance to show my creative side and designed the 2010 binder covers. Being Member at Large, I’m very excited to work with a great group of people and bring a new face to the board.



Random Tidbits:

Recreation: volleyball, running, hiking and learning how to hunt and fish

Favorite Shows: Dexter, Weeds, The Walking Dead, True Blood, Big Bang Theory

Did you know?

If you don't know me or don't recognize me and were at the Tacoma 2011 banquet and saw a zombie Amy Winehouse...that was ME!!

People V. Buza (Cal. App. 2011) (Depublished Oct. 19, 2011)

A Review of a Recent California Court of Appeals Decision on DNA Collection from Arrestees
By Megan Ashton, Forensic Science Division - Montana State Crime Laboratory

Publicly accessible copy of opinion (all page citation references refer to this version): <http://www.wired.com/images/blogs/threatlevel/2011/08/dna.pdf>

On August 4, 2011, the State of California First Appellate District ruled on the collection of DNA from individuals arrested for a felony offense in the state of California. At issue was whether such collection violates an individual's Fourth Amendment right to be free from unreasonable searches and seizures.

In this case, the appellant (Buza) was arrested on January 21, 2009 for arson of a police car after being found at the scene of the arson with matches in his pocket and oil in his backpack. After his arrest, while being detained in the county jail and prior to appearing before a judge, he was asked to provide a DNA sample pursuant to Section 296 of the California Penal Code, which authorizes collection of a DNA sample from those arrested for a felony offense. Mr. Buza refused. Due to his refusal, he was charged with misdemeanor failure to provide a DNA sample.

Mr. Buza was found guilty of all charges against him, including the misdemeanor failure to provide a DNA sample. After Mr. Buza refused to provide a sample, the court authorized the San Francisco Police Department to use force to collect a DNA sample. Mr. Buza finally provided a DNA sample for the California DNA database.

Mr. Buza appealed his failure to provide a DNA sample conviction on the grounds that the collection of a DNA sample prior to conviction violates an individual's Fourth Amendment rights. The First Appellate District agreed with Mr. Buza and overturned his conviction. In their conclusion they stated:

"The governmental interest advanced most vigorously by the Attorney General is the effectiveness of DNA testing in solving crimes. But even if DNA testing of arrestees was demonstrably valuable to law enforcement, the effectiveness of a crime fighting technology does not render it constitutional." People v. Buza, at pg. 43-44 (Cal. App. 2011) (Depublished Oct. 19, 2011).

The three judge panel felt that especially in light of the fact that Mr. Buza had not been arraigned or served with a warrant of probable cause, his privacy rights as an arrestee should be close to those of ordinary citizens. Therefore, the warrantless search of his person for his DNA and the continued searching of his DNA profile in the database was a violation of his Fourth Amendment rights. They noted that:

"The collection of the DNA sample, however, is only the first part of the search authorized by the DNA Act; the second occurs when the DNA sample is analyzed and a profile created for use in state and federal DNA databases.... The latter search is the true focus of our analysis and the analyses of other courts that have considered the validity of DNA statutes." People v. Buza, at pg. 9 (Cal. App. 2011) (Depublished Oct. 19, 2011).

They discounted the argument that the DNA collection is used to verify an offender's identity, as fingerprints are, based on the fact that it takes weeks to develop a DNA profile and even then the offender's identity must be verified with fingerprints. They also expressed concern over the state's retention of DNA samples in that future technologies may be used to discern other identifying genetic information from the sample than just the current CODIS loci:

"This raises questions both about the kind of personal and private information that may be derived from the DNA samples in the DOJ's possession, and the uses of that biometric data as scientific developments increase the type and amount of information that can be extracted from it." People v. Buza, at pg. 23 (Cal. App. 2011) (Depublished Oct. 19, 2011).

Based on these legal analyses, they conclude:


"...that the DNA Act, to the extent it requires felony arrestees to submit a DNA sample for law enforcement analysis and inclusion in the state and federal DNA databases, without independent suspicion, a warrant or even a judicial or grand jury determination of probable cause, unreasonably intrudes on such arrestees' expectation of privacy and is invalid under the Fourth Amendment of the United States Constitution. The judgment is reversed." People v. Buza, at pg. 44 (Cal. App. 2011) (Depublished Oct. 19, 2011).

This decision, published on August 4, 2011, essentially overturned the authorization to collect DNA samples from arrestees in California, making it unclear whether law enforcement should continue to collect these samples. However, the Appellate Court's decision was appealed and on October 19, 2011 the California Supreme Court agreed to review the case. **As a result of their decision to review, the Supreme Court depublished the decision and therefore, it no longer constitutes legal authority.** So, at this point, it's unclear what the fate of California's arrestee statute will be. Stay tuned for updates!!!

Crime Scene - A look at the Past and Future

Crime Scene
Winter 2011 Volume 37, Issue 1

2011 NWAFFS MEETING ANNOUNCEMENT INSIDE

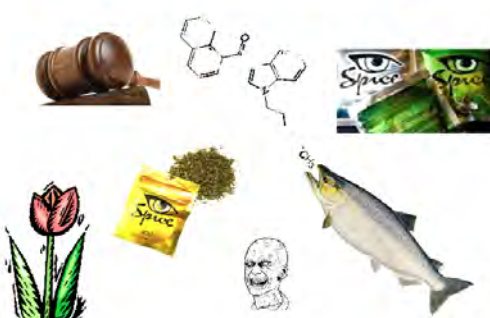


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Crime Scene
Spring 2011 Volume 37, Issue 2

WHAT'S IN YOUR NWAFFS SPRING?




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Crime Scene
Summer 2011 Volume 37, Issue 3

THE ESSENTIAL ELEMENTS OF A NORTHWEST SUMMER




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Crime Scene
Fall 2011 Volume 37, Issue 4

A TOAST TO THE NWAFFS!



PREPARE TO CELEBRATE THE NWAFFS'S 40th ANNIVERSARY!

Forty years of the NWAFS!

Maybe this might not seem to be a huge accomplishment but think of how huge this is when you think of all those that have benefited from our organization. Think of those who served on the board, hosted a meeting, taught a workshop, wrote a paper and those that just participated and increased their forensic knowledge. This is not only part of making the NWAFS organization great, but it is our foundational evidence of what a strong organization we are part of.

On the previous page were the covers of *Crime Scene* for 2011. When looking at these covers, we can't help but think of all that happened within our organization during this past year. The NWAFS established a peer review process for technical submissions to *Crime Scene* along with establishing and defining clear copyright and ownership of articles. Shortly after this we received two technical articles which successfully underwent this rigorous peer review process.

At the 2011 Tacoma meeting another first happened - this was our first meeting with the option to participate in special research topics. Our first two research projects were very successful with a look at automobile clear coats (paper to be published in spring 2012 *Crime Scene*) and characterizing bullet damage in clothing (publication pending).

In the next three pages, we will take a look at the look and content of the newsletter. We dug through the WSP Crime Laboratory Libraries collection of previous issues of *Crime Scene* to look at how the NWAFS newsletter has looked through the years. Because this is the winter newsletter, we thought it best to choose the winter newsletters from ten, twenty, and thirty years past (the newsletter began in 1973 but those very first issues were not able to be tracked down).

As for our NWAFS future just look at the cover; an image of Steven Stone, taken and enhanced in Adobe® Photoshop® CS5 by him. A little bit of art in a scientific newsletter. The NWAFS organization and the *Crime Scene* newsletter will continue to bring you organization news along with TWG/SWG updates, book reviews, northwest notes and more in 2012. *Crime Scene* has come a long way and will continue down this same path with your help. Make sure that you be part of our 40th anniversary!

Jeff Jagmin and Steven Stone

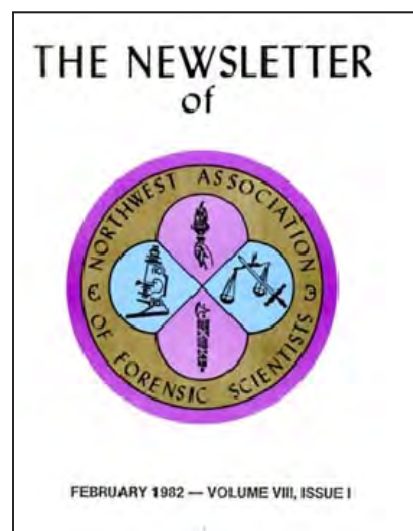
**Look for me at the
2012 Missoula
Meeting!**



30 Years Ago 1982 –

President - Brad Telyea
OSP Crime Lab

Editor - Daryl Brender
Eastern WA Crime Lab



This was Daryl Brender's last issue after five years as editor. The newsletter is just that, a newsletter. It was smaller (pamphlet-sized) and consisted of business meeting notes, some abstracts from the meeting and various news from around our region. One item of note was a job opening for a position with the Bureau of Forensic Science in Virginia for a salary between \$15,991 and \$21,844! Transitions between sections were quick and the abstracts previously mentioned seemed to just show up, it's uncertain if they were related to a NWAFS meeting or not.

SOME WORK OF THE FORENSIC SCIENTIST

R. Shanahan

The work of the forensic scientist can assist in answering questions in police investigations, such as reconstructing what happened, confirm or disprove statements from a suspect or a witness, test a theory, narrow the search for evidence, indicate how a crime has been committed, ascertain whether there is an association between a suspect and a scene or a victim. Some case work experience is presented to illustrate this assistance.

ANIMAL HAIR STRUCTURE AND IDENTIFICATION

Tom D. Moore, Research Biologist, Wyoming Game and Fish Research Laboratory

Examination and identification of animal fibers found during the investigation of crimes of violence between man or between man and animal have assisted in the successful prosecution of some of these crimes. A thorough understanding of hair growth, function, chemistry, and structure is a prerequisite for a criminologist to become proficient in hair identification.

To this end, a brief review of the present knowledge of hair individualization is presented. The gross and fine structure of hairs as revealed by light and electron microscopy as well as chemical composition and relation to physical properties are reviewed. Growth and function of hair coats have limited forensic value but are also discussed.

A total of 12 characteristics have been used in identification of animal hair to family and genus. They are: color, shape, length, diameter, medulla configuration, pigment areas, striations, basal configuration, tip configuration, scale patterns, scale margin types, and scale margin distance. Using these characteristics as well as artificial treatment (bleaching), damage (cutting), and other specialized structures, human hairs are separated to race and body area. Individualization of human hair has been less successful due to extensive hybridization among the population. Conclusions derived about human hair are threefold: Unknown hairs are consistent with a given known sample, are dissimilar, or differences are not sufficient to draw a conclusion.

Pros and cons of other techniques for hair identification are discussed, but the methods of microscopy are still the only satisfactory procedures.

Examples of cases involving animal hair identification at the Wyoming Game and Fish Research Laboratory are discussed.

COMMONWEALTH OF VIRGINIA

Department of General Services
Division of Consolidated Laboratory Services
Bureau of Forensic Science
P. O. Box 999
Richmond, Virginia 23208

EMPLOYMENT OPPORTUNITY - SEROLOGIST

The Commonwealth of Virginia is seeking two Serologists or Serology Trainees, one for its Tidewater Regional Laboratory in Norfolk, VA and another for its Central Laboratory in Richmond, VA.

Minimum requirements include knowledge in the basic concepts of chemistry, biology and/or natural sciences; ability to perform accurate laboratory analysis independently; ability to express themselves in a clear, concise manner in both verbal and written communication.

Prefer a baccalaureate degree in a physical or natural science; knowledge of the forensic principles, practices, procedures and techniques used to prepare, examine and analyze items of evidence related to serology; knowledge of the theory of various antigen systems; knowledge of the theory and methodology of basis electrophoresis; knowledge of the methods and techniques used in the identification of spermatozoa and the identification of ABO blood group factors and enzyme types in seminal fluid and other physiological fluids from dried stains.

Salary: \$15,991 — \$21,844

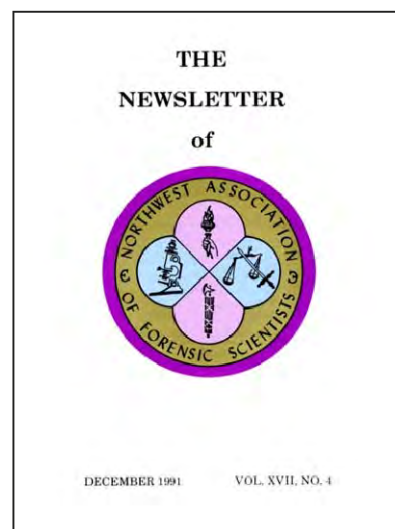
Contact: Warren G. Johnson, Director
Bureau of Forensic Science
P. O. Box 999
Richmond, VA 23208
(804) 786-2281

EQUAL OPPORTUNITY EMPLOYER

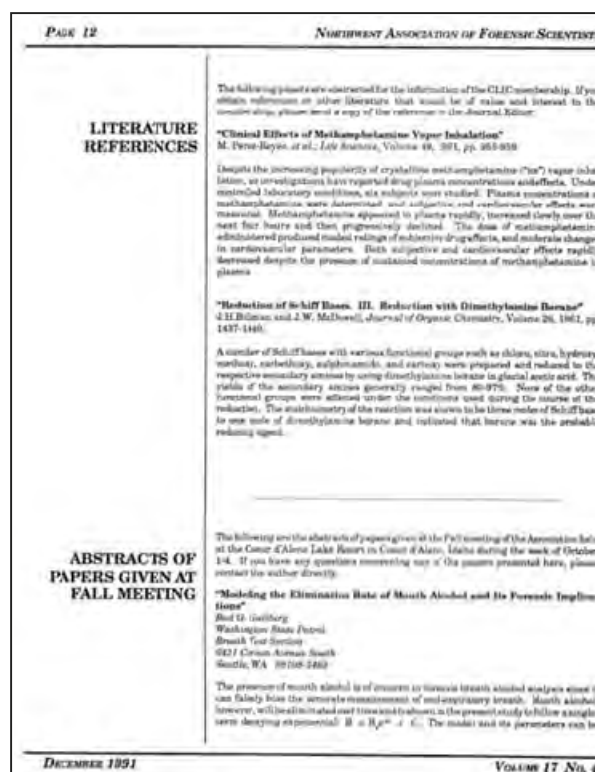
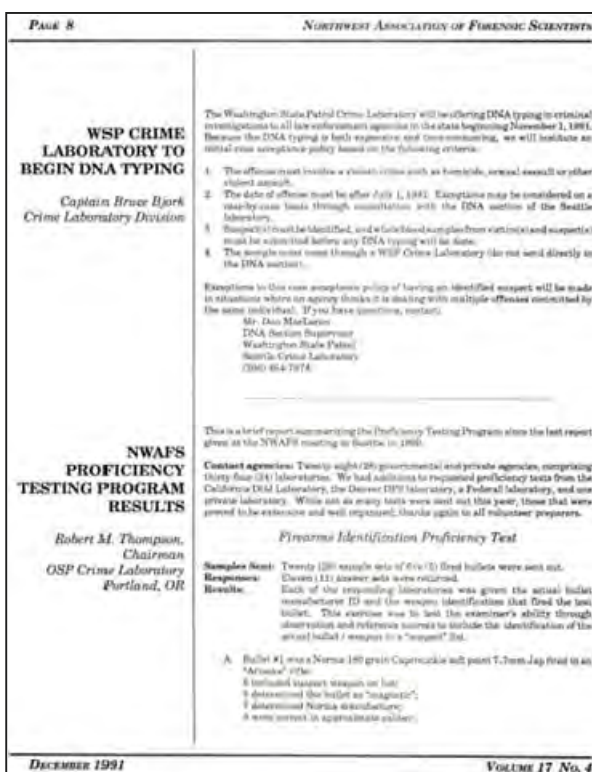
20 Years Ago 1992 (Really December 1991) –

President - Michael Howard
OSP Forensic Lab

Editor - Roger Ely
DEA Western Lab



By the twentieth anniversary, the newsletter had grown in size and length, now coming in standard paper size and packed with information. The newsletter was taking shape and consisted of column after column of text and information ranging from regional announcements to the abstracts of papers from the fall meeting. Of note in this year was the notice that the WSP was beginning DNA typing! Also mentioned was a discussion on proficiency testing conducted by the NWAFFS itself involving the fields of firearms, serology, drug identification, and glass analysis organized by Robert Thompson (then with Genelex and now with NIST)



10 Years Ago 2002 –

President - Jay Henry
Utah State Crime Lab

Editor - Mathew Noedel
WSP Crime Lab



The newsletter had morphed into *Crime Scene* very much as we know it today. "Caption This!" was in full force, scientific articles from Chesterene Cwiklik and Greg Frank were in the content, and a full discussion of the upcoming meeting's workshops and location were included.



SWGTREAD UPDATE

An Update from the September 2011 meeting of SWGTREAD

SWGTREAD, the Scientific Working Group for Shoeprints and Tire Tread Evidence is a seventeen member board comprised of examiners (from state, local and federal agencies and private practice), researchers, and educators in the field. The SWGTREAD board met September 26-29, 2011, in Fredericksburg, VA.

The group continues to work on developing the SWGTREAD.org website as a resource for examiners. Work on addition of admissibility resource materials to the website is currently ongoing. If you are a footwear/tire track examiner and have not visited the website or joined the discussion forum, I encourage you to do so.

The comment period for the revisions to the [Standard Terminology Used for Forensic Footwear and Tire Impression Evidence](#) document has closed and the group is working on the final version of this document.

SWGTREAD was recently asked to provide an annotated bibliography in response to a list of questions posed by the Research Development Testing & Evaluation Inter-agency Working Group (RDT&E IWG) of the Subcommittee on Forensic Science (SoFS). The group has worked together to develop a comprehensive response to these questions. The complete response will be posted to SWGTREAD.org as a resource.

The SWG group will be undergoing some changes in the coming year as responsibility for administration and funding is taken over by the NIJ. Things are in a state of flux at the moment, but we hope to know more about what changes will take place in the near future.

In March of 2012, we will welcome SWGTREAD to the Pacific Northwest for a meeting in Portland, Oregon, where we hope to take advantage of some learning opportunities provided by local manufacturers. The September 2012 meeting will be held in Dothan, Alabama.

Rhonda Banks

Oregon State Police

BOOK REVIEW

Forensic Investigation of Explosions

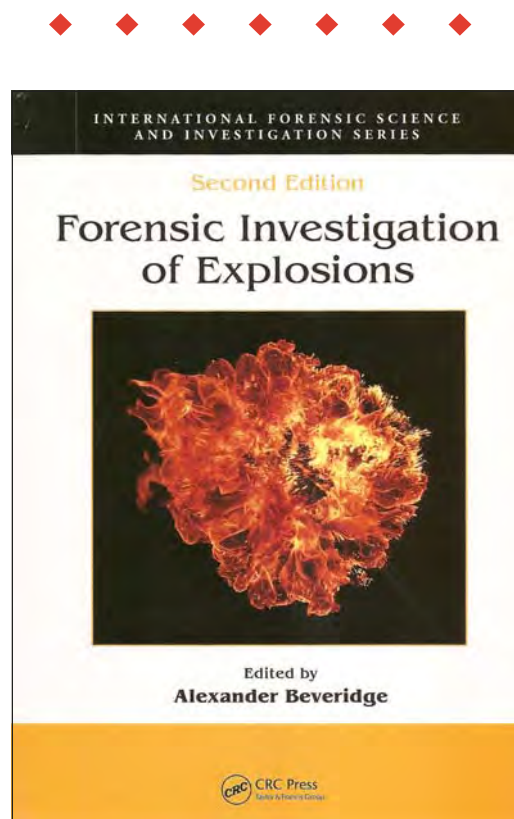
Alexander Beveridge,
CRC Press, International Forensic Science and Investigation Series
ISBN: 9781420087253

Reviewed by
Terry McAdam, Laboratory Manager
Washington State Patrol Crime Laboratory

This recent addition to the International Forensic Science and Investigation series from CRC Press was edited by Dr. Alexander (Sandy) Beveridge. Sandy had a 30-year career in the Forensic Science Service of the Royal Canadian Mounted Police, where he headed the chemistry section in the Vancouver laboratory for many years. He is today a lawyer and consultant forensic scientist.

He has gathered together a notable group of world-renowned experts in the field of explosives to produce an impressive book that runs to twenty chapters and 777 lavishly illustrated pages. It must first be said that the information provided is very much current and is presented in a consistently easy to read style, which is remarkable, given that there is a total of forty authors.

The book begins with chapters on the general history, development, and characteristics of explosives and propellants, and then moves to a discussion of the physics of explosion hazards, before an excellent dissertation on the post 9/11 challenges in the detection of hidden explosives. The next block



The opinions expressed in this review are solely those of the author and are not those of the NWAFS nor the Washington State Patrol Crime Laboratory.

of chapters is concerned with the general protocols at the scene of an explosion and the best practices for the recovery of explosive material and its subsequent forensic lab examination. How these protocols and practices work in the real world, is covered by a very thorough treatise on the management of casework within the United Kingdom Forensic Explosives Laboratory.

The next three chapters on aircraft explosive sabotage investigation, the evidence of explosive damage to materials and structures in air crash investigations, and the investigation of gas phase explosions in buildings, may seem a little esoteric to forensic scientists who work in local and state laboratories. However the information presented merits taking the time to review. As an old SEM jockey my heart was gladdened by the presence of so many high magnification images of metal and fiber damage.

As always, it is good to learn something new. As a denizen of Northern Ireland who worked in the crime lab there for ten years dealing with the effects of car bombs, I was unaware the modern term for these are vehicle-borne improvised explosive devices (VBIED). How to respond to the detonation of these devices, conduct an on-site survey, establish a perimeter, set up a command post, and how to process a VBIED scene is explained in the context of the investigation of the bombing of the United States Embassy in Nairobi, Kenya in 1998.

The investigation of pipe bombs and the characteristics, detection and analysis of improvised explosives are treated in great depth, and their chapters include sections on the newer peroxide-based improvised explosives that are missing from other standard texts on explosives.

The main analytical section of the book concerns the instrumental analysis of explosives using thin-layer chromatography, high-performance liquid chromatography, gas chromatography, ion chromatography, mass spectrometry, and infrared spectrometry. In common with all chapters in the book, each chapter in this section is followed by an extensive and up-to-date list of references.

The book concludes with an evaluation of portable explosive detection instruments, a discussion of the significance of analytical results in explosive investigation, and advice for the forensic expert witness on how to present explosive casework evidence in court.

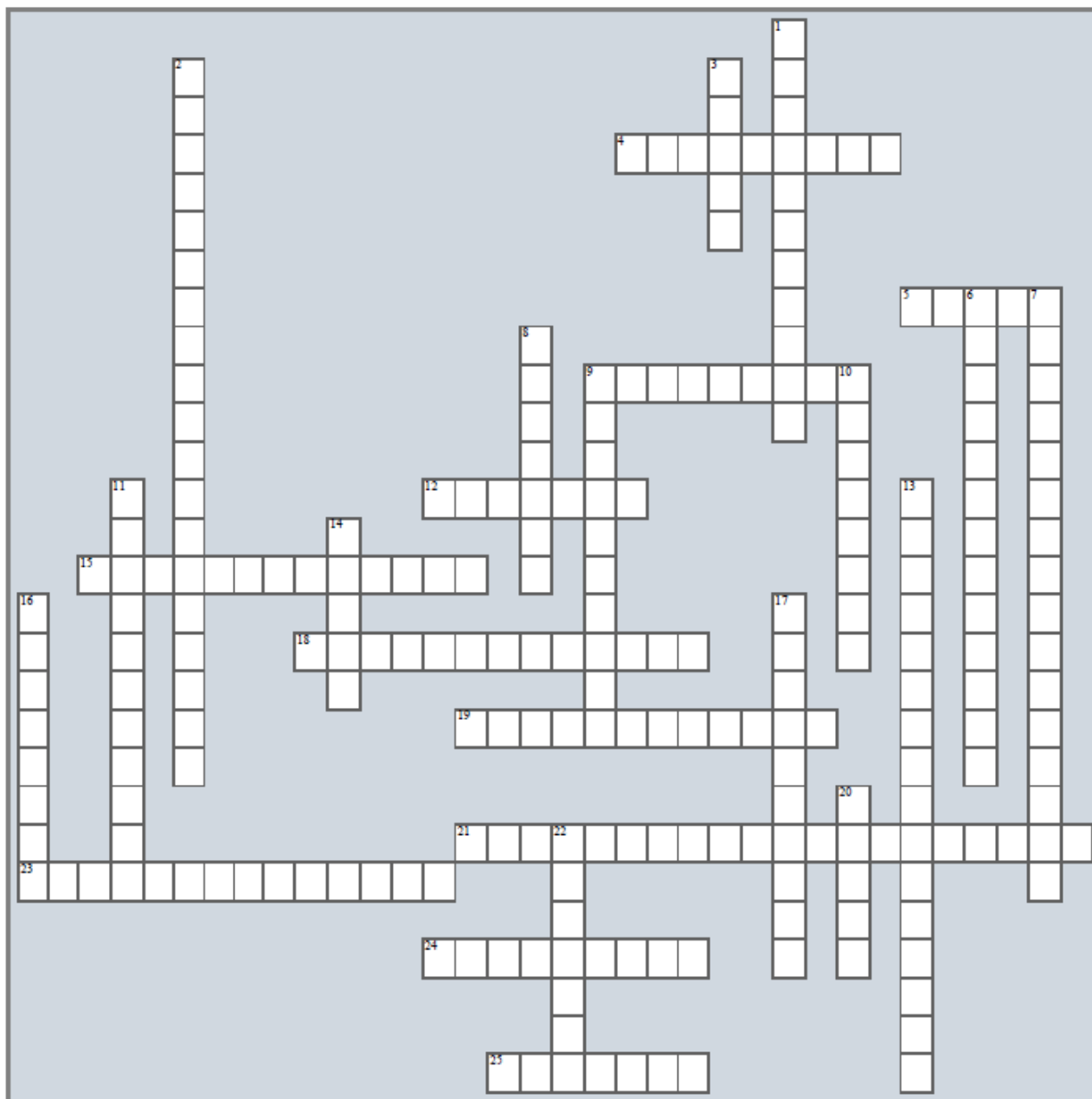
This book will appeal directly to the forensic scientist who actively analyzes explosive evidence but crime scene practitioners will also benefit from a study of the many case histories and the methods of processing such scenes. The book is a great addition to the library of any forensic scientist or crime laboratory.



Forensic Science Puzzler

by Jennifer Malone

Note: Spaces are in answers



Across

4. An unsolved case which is still open but no longer being actively investigated.
5. A fine, threadlike piece; matter made from such threads.
9. A machine used to monitor bodily functions which may change when an individual lies.
12. The internal medical examination of a body used to determine the cause and circumstances of death.
15. The impact of blood on surfaces.
18. The disintegration of body tissues after death.
19. The reduction in body temperature after death.
21. Patterns of cracks in glass pierced by a projectile such as a bullet which runs between the radial fractures.
23. An individual with a specialized knowledge of a certain field that can assist in the understanding of complicated information or offer an expert opinion.
24. A waxy, soap-like substance that forms on corpses during decomposition under specific conditions. Also known as 'grave wax'.
25. An attempt to replicate the original item and pass it off as authentic.

Down

1. A swab taken from the mouth to collect epithelial cells for DNA analysis.
2. A basic microscope composed of two lenses which focus a magnified image of the subject on the retina of the observer's eye.
3. The Combined DNA Index System, the FBI database of genetic information.
6. The congestion of blood in the lowest areas of a dead body.
7. A measure of the degree through which light is refracted when passing through a particular material compared to a vacuum.
8. The larvae of flies and other insects that live on rotting food.
9. The lawyer that represents the government.
10. Murder, a death caused by another person.
11. A dark, ring-like mark found around an entrance wound, composed of lead, carbon oil and dirt.
13. A method of keeping track of who has handled a piece of evidence, when, and for what purpose. Vital in ensuring evidence is not damaged or altered in any way.
14. Light Amplification by Stimulated Emission of Radiation. A device used to produce a beam of optical radiation by stimulation of electronic, ionic, or molecular transitions to create energy.
16. An object used to bind or strangle someone.
17. A device in a gun which strikes the primer, igniting the projectile's propelling charge.
20. The intentional and unlawful burning of a building or other property.
22. A public official who investigates by inquest any death not due to natural causes.

MEETING ANNOUNCEMENTS

Association for Crime Scene Reconstruction 2012 Annual Training Conference
February 14-16, 2012
Monterey, CA
<http://www.acsr.org/>



AAFS 64th Annual Scientific Meeting
Global Research: The Forensic Science Edge
February 20-25, 2012
Atlanta, GA
<http://aafs.org>

Pacific Northwest Division of the IAI
May 1 - 4, 2012
Boise, ID
www.pnwdiai.org

AFTE 2012
43rd Annual Training Seminar
June 24 - 29, 2012
Buffalo, NY
<http://www.afte.org/>



IAI 97th Educational Conference
Forensics in Phoenix 2012
July 22 - 28, 2012
Phoenix, AZ
www.theiai.org



Midwestern Association of Forensic Scientists
41st Annual Meeting
September 24-28, 2012
Milwaukee, WI
www.mafs.net



NORTHWEST WINTER AMUSEMENTS

Western Idaho Fly Fishing Expo

January 13-14th

Boise, ID

<http://www.bvffexpo.com/>



Chocolatefest

January 20-22nd

Portland, OR

<http://www.chocolatefest.org/>

Winterhop Brewfest

January 21st

Ellensburg, WA



Seattle Boat Show

January 27-February 5th

Seattle, WA

<http://www.seattleboatshow.com/>



Race to the Sky

February 10-15th

Helena-Seeley Lake, MT

<http://racetotheskysky.org/>



Southern Oregon Road and Custom Show

February 18-19th

Central Point, OR



Celebration on the Territorial Thanksgiving Wine Trail

November 24 - 27th

<http://www.oregonwinecountry.org>

CAPTION THIS!



The best caption submitted for this photo will win a
\$20 gift card of your choice!

editor@nwafs.org

CAPTION THIS WINNER!

Congratulations to our last
newsletter's winner:

Brady Booth
Oregon State Police

**"...and then this giant rabbit popped up,
muttered something about 'Albuquerque',
and took off again."**



Runner up goes to:

Mike Croteau
Washington State Patrol Crime Laboratory

**"Heads, we repair the road. Tails, we're laid off
due to state budgetary constraints. "**

FREE REGISTRATION!

Got an interesting technical note, informative article
or research project?

Make a submission to the NWAFS newsletter, and you could win **FREE
REGISTRATION** to an upcoming NWAFS meeting!

The officers vote for the “Best Independent Newsletter Submission” once
per year and award a **FREE REGISTRATION** to the winner.



Help keep the NWAFS newsletter interesting and informative by
sending your submissions to:

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Jeff.Jagmin@wsp.wa.gov
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206.262.6109