

The CACNews

News of the California Association of Criminalists • Fourth Quarter 2000



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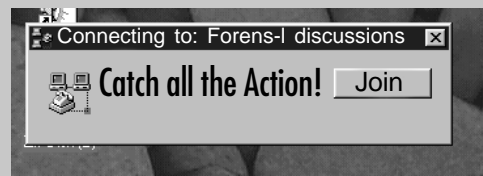


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California Association of Criminalists

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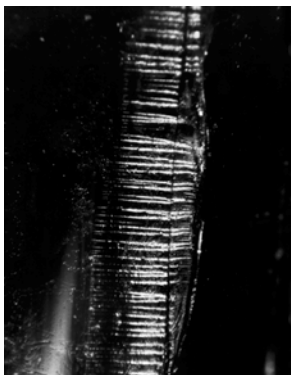
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Trace evidence

On the cover: Hackle marks on the edge of a tiny glass chip are seen in this photomicrograph. Photo courtesy of Jim White.

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Southern Regional Director's Report

On June 21st the San Diego County Sheriff's Office hosted a luncheon and study group meeting. The total number of attendees at the luncheon was over 100 (the largest group that I can remember). The speaker was John Sylvester, FBI Special Agent, speaking on "Weapons of Mass Destruction". Melinda Ronka, Jeannie Parsons, Celia Lukomski, and Barbara Burritt as well as other members of the Sheriff's staff deserve recognition for their efforts in hosting this successful meeting. The **Crime Scene** Study Group met for the 2nd time and will now be chaired by Carolyn Gannett (thank you) with my help. The discussion mostly centered around what is being done by the Southern California Labs with respect to call back, standby pay, and organization. A number of topics for future meetings was compiled, they will be distributed to the attendees when they are typed up. All of the other study groups also met, these included the **QA Study Group** with their continuing workshop agenda, **Arson** covered the ASTM standards and the use of new containers, **Forensic Biology** covered STR validations, **Blood Alcohol** dealt with roadside evidentiary testing, **Trace Evidence** had a speaker, Jon Rebman, from the San Diego Natural History Museum talking about botanicals, the **Drug** study group had a round table discussion. My thanks to the persons who have been chairing these study groups: John Simms, Dawn Sorenson, Mark Traughber, Jorge Pena, Gene Lawrence, Greg Gossage. Also, Ines Callison has been chairing the **Toxicology** study group.

The next meeting is scheduled for September and will be hosted by the Los Angeles County Sheriff's Office. The contact person is Dean Gialamas. The December meeting will be hosted by the Orange County Sheriff's Office. I will be contacting Labs to host the March and June, 2001 meetings shortly. Not much response has been received concerning the preference for Luncheon or Dinner Meetings from the website, we need to educate the membership to check the website out regularly. However, attendance at the last two luncheon meetings seem to speak for the preference of luncheon meetings. Jerry Massetti has proposed a shoe/tire tread impression study group to meet maybe a couple of times a year to reinforce training be given by CCI.

—Jim Stam

Spring CAC to be in Tahoe City

The California Association of Criminalists is presenting its 97th semi-annual seminar on May 7-12, 2001 in conjunction with CCI classes starting May 7. The site is Granlibakken Conference Center, Tahoe City, CA. Two California State Department of Justice offices – The California Criminalistics Institute (CCI) and the Bureau of Forensic Services Sacramento Laboratory, will co-host this seminar with the meeting's theme – Forensic Science Training in the New Millennium.

The activities will include technical papers, planned workshops, and CCI classes: 3-day Microscopy of Rape Evidence, 2-days on Adobe Photoshop, 1-day on Windows 2000 for Professionals, 1-day DNA Workshop, and Forensic Anthropology of the Donner Party encampments and scene visitation, with more to be announced. For further information, contact Seminar Chairperson Victor C. Reeve at (916) 227-3575.

Notes from GSR Study Group

The GSR study group met on July 27 at the SFPD crime lab, Hunter's Point, San Francisco. A total of twelve people attended the first ever No. Cal. CAC Study group for GSR Analysis!

There were veterans (such as Linda French from San Mateo, Bob Hinckley

from Alameda and Faye Springer from Sacramento), relatively recent operators, neophytes and interested observers (DNA refugees?). The group discussed a wide range of issues: Preferred vendors for consumables (to customize field kits or not to customize field kits?, money is the issue), Protocols for collecting/analyzing data, Minimal particle size, Analysis worksheets (form vs. content), In-house experiments for environmental contamination issues, ASCLD validation, Criteria for GSR identification.

The greatest moment of the afternoon could be summed up in the poignant question for all GSR analysts, "How near is near?"

Linda Jacobson from FSA has conducted in-house experiments addressing the above question, her studies indicate that GSR under indoor conditions can be found as far as ten feet away.

In addition to the distance angle; Faye has been working on the global GSR angle—putting interns to work on environmental sources of GSR. Jason Kwast from Contra Costa Co. is also looking at environmental sources of GSR or GSR indicative particles, sampling everyone who enters the lab.

Well, that's just a snapshot of our first but needless to say not last GSR Study Group for us Northerners. I know that this meeting inspired a keener inter-



The BFS Firearms Technical Advisory Group met in San Luis Obispo July 17-21, 2000. During these intensive five days a tremendous effort was put into developing a quality firearm/toolmark training manual. The FTAG members below are: Dean DeYoung-BFS Ripon, Michael Giusto-CCI, Paul Sham-BFS Riverside, Nancy McCombs-BFS Fresno, Dave Barber-BFS Santa Barbara, Fred Tulleners-CCI, John Yount-BFS Santa Rosa and Terry Fickies-BFS Sacramento.

Jobs • Meetings • Courses

est in sharing information for the future. We even discussed having a regular monthly meeting—GSR User's Group (GSRUP?) and who knows maybe there's a place for us in the SWG of things.

"Til we backscatter again,

*Pam Hofsass
SFPD Crime Lab*

Stuff seen on the //WWWEB

(Accuracy not verified)

NWAFS Announces Fall Meeting

The Northwest Association of Forensic Scientists along with the Washington State Patrol Crime Laboratory will be holding its Fall, 2000 seminar at the Seattle Hilton during the week of October 9-13, 2000. Monday, Tuesday and Wednesday are packed with workshops including Recovering Prints from bodies, Capillary Electrophoresis, Methamphetamine from Cradle to grave, basic soil analysis, Crime Scene Tips and Tricks and many others. Then, Thursday and Friday will be a scientific paper session with presentations from a wide variety of scientists. Contact Kevin Jones for more information at: kejones2@wsp.wa.gov

Criminalist II Position

The Utah Bureau of Forensic Services has a position vacancy for Criminalist II (Forensic Chemist), which may be underfilled as a Criminalist I. The official job posting is available at: www.cl.state.ut.us

The Utah Bureau of Forensic Services has a position vacancy for Criminalist II (DNA Analyst), which may be underfilled as a Criminalist I. The official job posting is available at: www.cl.state.ut.us

For more job announcements, be sure to visit the American Society of Crime Laboratory Directors (ASCLD) web site www.ascl.org. Just click Employment on the main menu to jump to that area. To post an opening, send a text or Word document to webmaster@ascl.org who will review it for appropriateness and post it within 1-3 days, on average.

Yuma Proving Ground 2000 Forensic Testing Session

The Yuma Army Proving Ground, The Arizona Department of Public Safety and The Southern California Firearms Study Group announces the Year 2000 Forensic Firearm Test Session at the Yuma Proving Ground will be December 8th and 9th, 2000.

The Yuma Proving ground supplies the forensic firearms examiners who wish to participate with Doppler Radar and ultra high-speed video equipment on a several kilometer long range for any experiment that is deemed safe to conduct. If you have a down range exterior ballistics problem that you need data on or are trying to figure out a problem that high-speed cameras may solve, please submit your experiment for scheduling. In the past we have looked at maximum range, flight characteristics, barrier penetration, ricochet, ejection and general exterior ballistics questions with all types of firearms. We have captured data from #8 shot (<.1") on up. This will be the 9th year the Yuma Army Proving Ground has been our gracious host and we have a good deal of Doppler Radar data and video as a result. If you have an experiment let us know. If you just want to come and help (nobody just watches in the end) let us know that as well.

The test session will be open to all practicing Forensic Firearms Examiners and other interested professionals from the Forensic Science, Firearms and Law Enforcement communities. New attendees must provide security information to Bill Morris (AZMorris@aol.com 602-223-2394) in advance. All those wishing to attend should inform Bill Morris or Jim Roberts of their intention to attend in order that a security list may be provided to the Yuma Proving Ground Security staff. This list must be provided by mid November.

Please send experiment proposals to Jim Roberts for scheduling. You will be contacted closer to the shoot date for experiment design and line log data that must be provided to the Yuma Staff prior to your shots if you wish accurate data.

There is no cost to attend the test session other than your share of lunch costs (we usually send out for pizza). Your personal expenses for transportation, lodging and meals are your responsibility of course. The expenses for firearms and ammunition for experiments are also yours to bear; however, there is a pool of interested people that may be able to loan

needed equipment in some cases. James L. Roberts, Firearm and Toolmark Examiner, Ventura Co. Sheriff's Lab, (805) 654-2308, James.Roberts@mail.co.ventura.ca.us

continued on page 9

Robert Alan Boese, 65 Prominent Midwest Criminalist

Robert Alan Boese, who died this July 20, was a forensic scientist before most of us knew what the word meant. He spoke out for the ideals in which he believed and helped found societies of which we are so proud today.

Although not a member of the ASCLD, Bob attended many ASCLD meetings as the Acting Director of the Chicago PD laboratory. Bob held an Associate Degree from Wright Junior College in 1960, a B. S. in Chemistry in 1969 and an MPA in 1974 from Illinois Institute of Technology.

Bob became a Police Officer with the Chicago Police Department in 1956, and was assigned to the Crime Laboratory as Crime Scene Investigator in 1958. In 1960, Bob became a Firearms Examiner, and moved up to Chief Examiner in 1963 and Chemist in 1965. He was promoted to Chief Chemist in 1971, Technical Coordinator in 1974, Commanding Officer in 1983 and Assistant Director of the Lab in 1985. He retired from the Chicago Police Department in 1986. During this time, Bob worked part time as a toxicologist with the Illinois Racing Commission, and, in 1975, started B & W Consulting Chemists.

Bob Boese was active in many professional organizations including, Founding Member of AFTE; Fellow of the AAFS; Incorporating Member of the ABC; Co-founder of the MAFS where he served two non-consecutive terms as President; Member of the ACS and the IAAI; National Committee for the Certification of Forensic Scientists, 1976-78; this committee eventually met in Chicago to form the ABC.

Bob is survived by his wife, June, and sons Mark and Brian. His son, Mark, is a forensic scientist in the Tulsa PD forensic laboratory.

*Carla M. Noziglia
Laboratory Director, Tulsa
Police Department, Tulsa, OK.*

NANCY MCCOMBS

A Praiseworthy Pioneer

We reap an invaluable sense of fulfillment as a result of having a major part in the judicial process. Yet, there is another benefit our profession provides of equal reward. Meeting colleagues. Perhaps it ends there, but if we are fortunate we may gain a valuable contact or, better yet, a good friend.

A few years ago while attending an AFTE seminar (Association of Firearm and Tool Mark Examiners), I was introduced to a woman who is quite possibly the world's first female firearm and tool mark examiner. Her name is Susan Komar.

Susan began employment for the Illinois Bureau of Identification and Investigation in 1967 after receiving her BS in Biology from St. Louis University in Missouri. She worked under the direction of Joseph Nicol who also taught at the University of Illinois and who, incidentally, worked on the Kennedy assassinations. Initially it was intended for her to receive training as a document examiner; however, as fate would have it a position needed to be filled in the firearm unit. Susan was fully trained as a firearm and tool mark examiner. Not only the sole examiner in the entire state at one time, but in my opinion possibly the world's first woman to work in this capacity.

In 1969 a group of firearm and tool mark examiners who regularly met through the American Association of Forensic Sciences broke off to form AFTE. Susan is one of its earliest members, joining in 1970; initially the only woman in attendance. Despite the female centerfolds shown between technical slides during presentations, she claims the male members respected her, always included her and were very protective of her. She recalls fondly many practical jokes including the time the "Chicago guys" told a stewardess on their flight that Susan had shot her husband and was being escorted to prison. And yes, the time they took Susan to a strip club. . . we won't go there.

Susan worked in Illinois for over 10 years before she left to raise her two children as a single parent for the next 7 to 8 years. Although she trained for an associate



**Upon acceptance
as an expert,
she never felt discriminated against
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despite looks of
disbelief she
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"firearms examiner."**

degree in nursing, it was not long before she returned to her true love and resumed working as a firearm/tool mark examiner for the North Carolina State Bureau of Investigation. It was here she became sworn and nearly lost her arm during a pursuit driving exercise when her unit crashed and flipped on the runway. Three years later, she began employment with the Florida Department of Law Enforcement, where you will find her today.

Upon acceptance as an expert, she never felt discriminated against in the courts, despite looks of disbelief she received when arriving as the "firearms examiner." However, Susan did not completely escape being treated unjustly. Time and time again she was passed over by her male counterparts for promotions and the opportunity to process crime scenes. The microscopes were not designed to accommodate women so when taking photomicrographs she resorted to climbing on the bench top and focusing with her foot while looking through the eyepiece. To further complicate matters, she was required to wear a skirt, although she was allowed to change into a matching polyester leisure suit for test firing purposes. Susan worked many hours of overtime without compensation, yet she never complained and

feels the natural dedication to solving crimes is not as appreciated.

Over the years Susan has trained many firearms examiners; she is committed to the field and would never consider trading working on the bench for an administrative position. Her advice to novice female examiners? Hold your ground. Applying the laws of physics can usually circumvent what you are lacking in physical strength. Learn to be outspoken, for no one will speak for you.

Reflecting on the many experiences Susan shared with me, it is clear she is a very special person and role model who has truly paved the way for many examiners like myself.

Nancy

Microscopy Sites Worth Seeing

Editor:

Congratulations to the entire CACNews staff and to those contributors who truly made the Third Quarter 2000 issue (Focus on Microcrystals) outstanding.

I certainly endorse the use of microcrystal tests in forensic analyses. However, I would like to make one "Black Hat" comment. If you are going to use microcrystal tests as a positive identification, then you must be prepared to defend that identification in court. You will be doing yourself as well as your fellow CAC members no favors if you cannot. The mere fact of the necessity for devoting an entire issue to this subject will assist the defense in suggesting that there is a lack of agreement in the forensic community as to the validity of microcrystal tests in drug identification.

In defending microcrystal tests you should be prepared to answer all kinds of seemingly inane questions. I can recall almost thirty years ago testifying in marijuana cases and being asked if I had a degree in botany. How many botany courses did I take as an undergraduate? How many in graduate school? How many different kinds of plant material had I personally examined? Of those plant materials that contain cystolithic hairs, how many had I personally examined? I might be asked to define terms like petiole, phyllode, vestiture, and axil. What does the "L" in *Cannabis sativa* L stand for?

As a minimum, you most likely have taken the one week McCrone course in Polarized Light Microscopy. No, you do not have either an undergraduate or graduate degree in microscopy, and it is unlikely that you have taken any college courses that were exclusively devoted to microscopy. What stains are used in dispersion staining? What is reciprocity failure? Define the terms, orthoscopic observation, Newton's series, and retardation.

If at this point you are thinking that it might be wise for you to go back and review your microscopy notes, I've a suggestion for you. Instead, use your computer and go to the following website: <http://www.micro.magnet.fsu.edu/primer/index.html>

There you will find a "MICROSCOPY PRIMER." It starts with the basics and then you can go to areas that are more specialized. Want to have some fun with your kids? Then go directly to: <http://www.micro.magnet.fsu.edu/primer/java/electronmicroscopy/magnify1/index.html>

The above is a "virtual reality" site where you (or your kids) are the operator of an electron microscope. As in real life, you will need to adjust the focus, adjust the contrast, and you can change the magnification. Specimens that you can observe include: honey bee, bullet ant, carpet beetle, centric diatom, cockroach, house dust mite, fruit fly, gecko foot, jelly fish, mayfly, ragweed pollen, and (my favorite) star sand.

Not quite as much fun, but more pertinent to the discussion on microcrystal tests is the location: <http://www.micro.magnet.fsu.edu/primer/virtual/polarizing/index.html>

At this site you will be using polarized light microscopy and observing specimens as they go in and out of extinction. Samples to choose from include: Apollo 15 Moon Rock, Vita-

min C, Budweiser Beer, Erythromycin, RU-486 (abortion drug), Tacrine (anti-Alzheimers), dinosaur bone, amethyst, testosterone, DDC (anti-AIDS), spinach extract, and riboflavin.

While observing the above site, I put on my "Green Hat" and came up with a suggestion for the CAC's website. Why don't we do the same thing, but instead have examples of some of the crystals seen in drug microcrystal tests? I would suggest cocaine, methamphetamine, and GHB as starters. And unlike the above website, I think it would be important to describe all the reagents and techniques used in carrying out the tests.

Another website that you might like to check out is the one for the Microscopy Society of America. And if you have the patience to put up with the "little beasties", you might even want to get involved in their "PROJECT MICRO," which helps teachers bring "real" science to the classroom. Go to: <http://www.MSA.microscopy.com/ProjectMICRO/PMHomePage.html>

And if anyone actually wants to get involved in putting drug microcrystal tests on the CAC's webpage, they can likely find people willing to assist them at: <http://www.lhs.berkeley.edu/GEMS/GEMS.html>

Bob Blackledge

Reference: Six Thinking Hats, Edward de Bono, Little, Brown and Company, New York, 1985

Digital PhotoPhobia

Editor:

The fact that some people dislike digital photography (or most things digital) has nothing to do with digital photography, it's perceived limitations, drawbacks, etc. In spite of all the arguments, counter arguments, intellectualizations, the real reason has to do with the psychological phenomenon known as 'fear of the unknown.' Look through any history book for reference.

Mark Traugher

Hybrid Awards?

Editor:

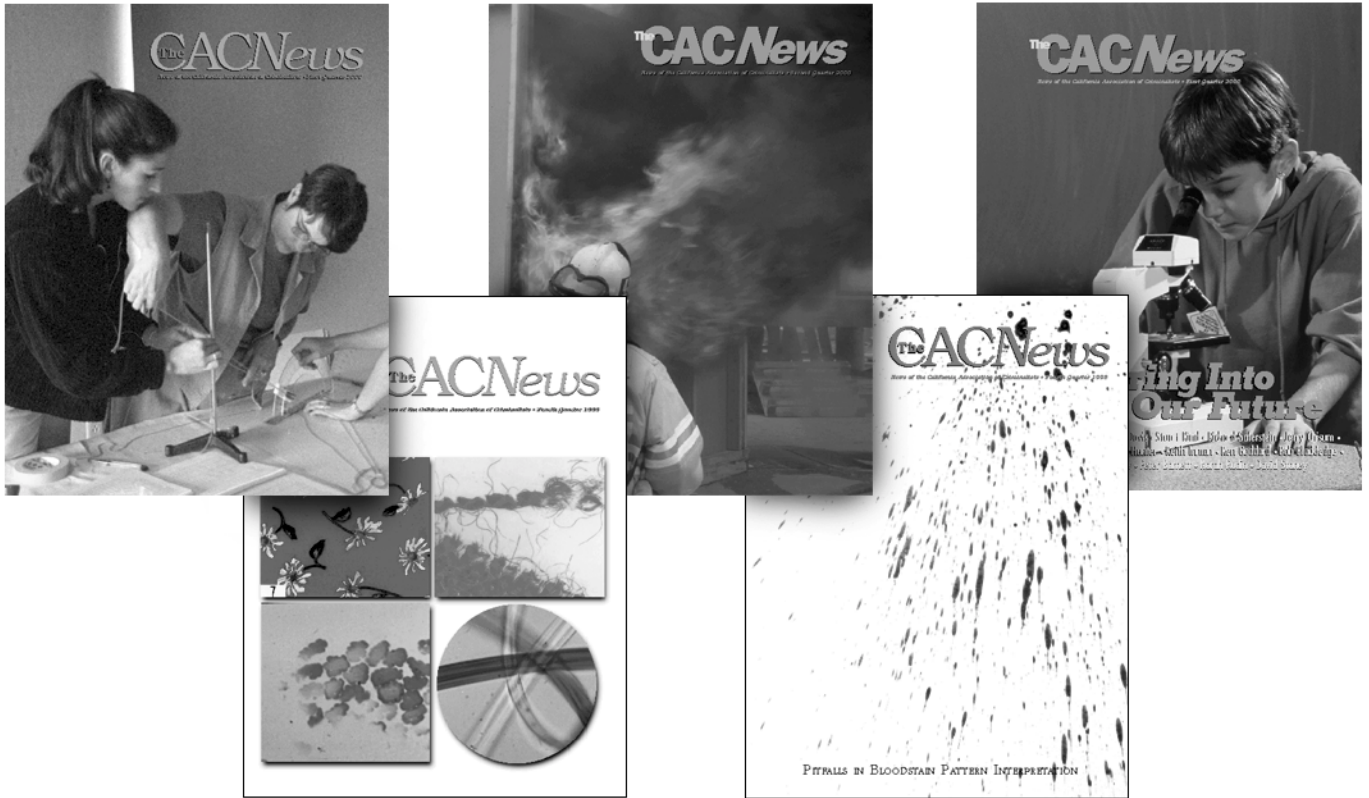
On Page 4, column two (CACNews, 3rd Quarter 2000), Lucien Haag—received the "Paul Greene Award" from the CAC. What the heck is the Paul Greene award? There is a Paul Kirk award. There is a Roger Greene award. Who is Paul Greene?

Carol Hunter

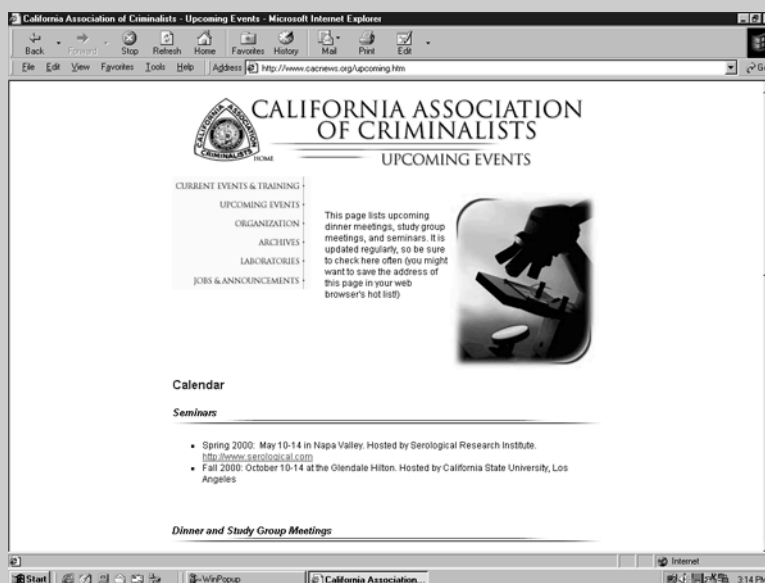
Our apologies, the award Luke Haag received at the May 2000 CAC Seminar was the Roger Greene Award.

Ed.

Keep in touch.



www.cacnews.org



it's just about us

Several Positions in Mississippi

The Mississippi Crime Laboratory is currently advertising for several positions. Please visit www.dps.state.ms.us for more information. The following is a description for the Section Chief: Positions for the Toxicology, Fire Debris Analysis, Trace Evidence, and Implied Consent Sections. The SALARY RANGE is \$56,227 - \$84,237. Please contact Renee Scales at rscales@mcl.state.ms.us or call her at 601-987-1600 for more information.

DPS-FORENSIC SECTION CHIEF- MISSISSIPPI CRIME LABORATORY

This is an advanced supervisory position located at the central laboratory. This position is responsible for the administrative and technical oversight of assigned discipline(s). Duties include but are not limited to administration of the Performance Appraisal System for subordinate personnel; developing, evaluating and implementing new technical policies and procedures; planning workload, workflow, deadlines, work objectives and time utilization with area personnel; researching and implementing new technology; presenting expert testimony in courts of law; and coordinating the training and professional development of area personnel. Supervision is received from the appropriate Forensic Division Coordinator. The omission of specific statements does not preclude administration from assigning specific duties not listed herein if such duties are a logical assignment to the position.

The following are examples of work performed for positions in this job class, and are not intended to reflect the essential functions of any one position. The essential functions of each individual position are determined and maintained by each individual agency. Determines work schedules of subordinates. Develops appropriate, equitable duty statements and performance levels for use in the review process for area employees. Consults with investigating officers, officials of courts of jurisdiction, and others involved in criminal cases. Responsible for developing, evaluating and implementing new technical policies and procedures. Coordinates caseload management within and between sections. Maintains appropriate quality assurance measures as required by the operational policies of the Laboratory and in coop-

eration with the Quality Manager. Supervises the daily operations of assigned section to ensure the efficient, effective use of resources and personnel.

Coordinates the training and professional development of subordinate personnel. Researches and implements new technology. Implements or initiates scientific analyses or examinations upon evidentiary material to include items processed as a function of quality assurance procedures. Presents expert testimony in courts of law. Communicates on a regular basis with employees both individually and in section meetings. Related or similar duties are performed as required or assigned.

For positions in the disciplines of Toxicology, Controlled Substance Identification, Fire Debris Analysis, Trace Evidence, and Implied Consent: A Bachelor's Degree from an accredited four-year college or university in chemistry or in one of the natural sciences, or forensic science and a minimum of twenty-four (24) semester hours of chemistry to include analytical chemistry and twelve (12) years work experience in one or more of the above disciplines. For positions in the disciplines of Latent Prints, Questioned Documents, Firearms and the Technical Assistance Unit: A Bachelor's Degree from an accredited four-year college or university in criminal justice, forensic science or other directly related field and twelve years of work experience in one or more of the above disciplines. Or, only for the disciplines of Latent Prints, Questioned Documents, Firearms, and the Technical Assistance Unit, Graduation from a standard four-year high school or equivalent (GED) and sixteen years of work experience in one or more of the above disciplines. Special Qualifications (as determined by the employing agency:) Each applicant must possess forensic certification from a recognized forensic certification program specific to their discipline. Must possess certification or be eligible for certification to conduct independent case work by the Mississippi Crime Laboratory. Must possess certification or be eligible for certification as an instructor by the Board of Law Enforcement Officer's Standards and Training. Possess documented training in supervisory or management skills.

Manager Opening in North Carolina

Charlotte-Mecklenburg Police Department -Crime Laboratory Charlotte, North Carolina announce the following opening: **Crime Scene Search Manager**. Salary Range: (\$42,435 to 53,004) Dependent on Qualifications and Experience.

This is a full time managerial and supervisory position for a 24-hour crime scene search field operation, and 8-hour forensic photography unit in a city/county crime laboratory.

Requires knowledge of all facets of crime scene search services to include: detecting, collecting, photographing, and the preservation of physical evidence found at crime scenes and the supervision and directing of 21 crime-scene search technicians including 4 shift supervisors to render this service.

At least 2 years experience in crime scene search work with at least a baccalaureate degree in Law Enforcement, Criminal Justice, a physical science (Chemistry, Biology, Physics, etc.) or equivalent combination of experience in course work and training equal to a baccalaureate degree in the aforementioned degree programs. Strong personnel supervisory and management experience pertaining to law enforcement missions.

Thorough knowledge in detection, collection and preservation of scientific evidence as well as the forensic requirements for the proper collection of analytical evidence, and knowledge of photographic preservation of the scene.

Knowledge of general laws, policies, rules and regulations involved in law enforcement. Ability to supervise and train crime scene search technicians to efficiently process and collect appropriate evidential materials and maintain a high quality work product.

Send current resume or for more information contact: Roger C. Thompson, Crime Laboratory Director, Charlotte-Mecklenburg Police Crime Laboratory, 601 E. Trade Street, Charlotte, NC 28202-2940. Voice: (704) 353-1100 FAX: (704) 353-0088

E-mail:

rthompson@cmpd.ci.charlotte.nc.us

TRAINING & RESOURCES VIDEO

(CAC Members Only)

SEROLOGY / DNA

- S1 **Electrophoresis Basics**—Linhart • **Glycogenated Vaginal Epithelia** —Jones
• Erythrocyte Acid Phosphatase — Rickard • Phosphoglucomutase —White /
M. Hong
- S2 **Immunology** — Stockwell
- S3 **Gm / Km** —Stockwell / Wrxall
- S4 **Peptidase A** — Yamauchi
- S5 **ABO** — Thompson
- S6 **Saliva** —Spear (incl DNA Kelly-Frye/Howard Decision)
- S7 **Presumpt. Tests/Species/ PCR Intro**—Peterson/Mayo
- S8 **Gc sub**—Devine/Navette
- S9 **Statistics**—M. Stamm
- S10 **Haptoglobin** — D. Hong
- S11 **Population Genetics & Statistics Course**—Bruce Weir
- S12 **Micro. Exam. of Sex Assault Evidence**—Jones
- S13 **DNA Workshop** — Spring 1993

CRIME SCENE

- C1 **Bloodspatter Lecture** —Knowles
- C2 **Bloodspatter Lecture** — Chisum
- C3 **Crime Scene Investigation Symposium**—Fall '88 CAC

GENERAL INTEREST

- G1 ABC News 9/23/91: "Lab Errors"
- G2 48 Hours 9/25/91: "Clues"
- G3 Founder's Lecture: Stuart Kind— Fall '93
- G4 Founder's Lecture: Walter McCrone—Spr '90
- G5 Founder's Lecture: J. Osterburg—Fall '91
- G6 Founder's Lecture: Lowell Bradford—Spr '93
- G7 OJ Simpson Tonight Show Clips
- G8 "Against All Odds—Inside Statistics"

ALCOHOL / TOXICOLOGY

- A1 **Forensic Alcohol Supervisor's Course**—DOJ

TRACE EVIDENCE

- T1 **Basic Microscopy Lecture**—E. Rhodes
- T2 **Tire Impressions as Evidence**—Nause
- T3 **Evaluation of Lamp Filament Evidence**—Bradford
- T4 **FTIR Lecture**—Moorehead
- T5 **Gunshot Residue Lecture**—Calloway
- T6 **Footwear**—Bodziak
- T7 **Footwear Mfg. Tour** —Van's Shoes
- T8 **Glass Methods**—Bailey / Sagara / Rhodes
- T9 **Fiber Evidence**—Mumford/Bailey/Thompson
- T10 **Trace Evidence Analysis**—Barnett/Shaffer/Springer

FIREARMS

- F1 **Forensic Firearms Evidence** —Haag
- F2 **Wound Ballistics: "Deadly Effects"**—Jason

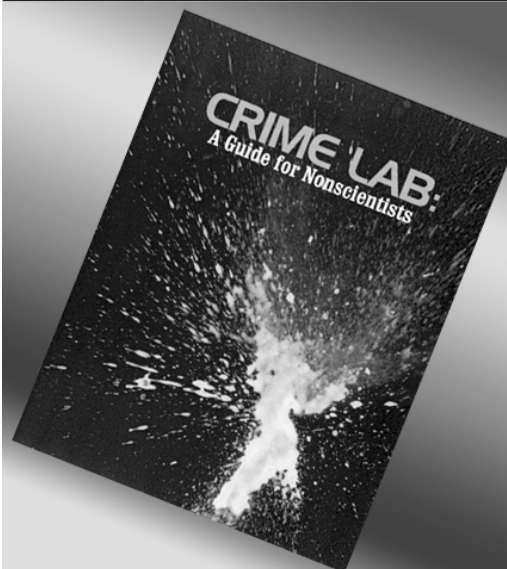
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Sheriff-Coroner Laboratory
320 N. Flower St., Santa Ana, CA 92703
(714) 834-4510 voice (714) 834-4519 FAX

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"... this is the best book I've
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California Association of Criminalists Training and Resources Committee

Dear Member:

The 2001-2002 Training and Resources Survey is located on the reverse side of this notice. CAC sponsored courses offer CAC members an opportunity to obtain training in areas of general interest or for career development and enhancement. Applications will be accepted from members desiring training in fields outside of current work disciplines including supervision. Agency supervisory approval is not required for CAC sponsored classes, however applicants should be prepared to attend such courses on their own time and expense, and meet any prerequisite criteria for the class.

Please specify if you have an interest in a specific area or specialty within an area that is not listed on the survey. Future courses are developed according to member interest and needs based on the returned surveys. In the event that CAC sponsored courses are not available during the coming year in categories determined to have high interest, the CAC Training and Resources Committee will make every effort to make such courses available as soon as possible.

Survey results will be forwarded to CCI for use in the development of their curriculum. This is a unique opportunity for CAC members to have direct input into future CCI training schedules.

Surveys must be returned by Friday, November 3, 2000 to Patricia Lough.

Patricia Lough, Co-Chair
c/o San Diego Police Department
1401 Broadway MS 725
San Diego, CA 92101
619-531-2460 FAX: 619-531-2520
e-mail: plough7537@yahoo.com

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California Association of Criminalists
2001-2002 Training and Resources Survey

Please select 3 choices total that you would likely be able to attend during the next year in the order of preference with 1 being the highest. Circle your preferences for those areas listing options, i.e., Trace (Hair/Fibers/Glass).

- ☐ GENERAL CRIMINALISTICS
- ☐ CHEMISTRY
- ☐ FORENSIC BIOLOGY
- ☐ OTHER
- ☐ Crime Scene (I &/or II, Processing and/or Reconstruction)
- ☐ Controlled Substances
- ☐ Capillary Electrophoresis
- ☐ People Skills
- ☐ Fingerprints (Processing and/or Comparison) (Intro./Adv.)
- ☐ Clandestine Labs and/or Refresher
- ☐ Microscopy of Rape Evidence
- ☐ Technical Writing
- ☐ Firearms/Toolmarks (Intro and/or Comparison/Criteria)
- ☐ Toxicology and/or Poison Analysis
- ☐ Sexual Assault Evidence
- ☐ Quality Assurance Practices
- ☐ Assault Weapons (Characterization/Examination)
- ☐ Arson (Analysis, Collection)/Intro or Advanced
- ☐ PCR-DNA: DQA1-PM
- ☐ Problem Solving/Critical Thinking
- ☐ Firearms Trajectory
- ☐ Blood Alcohol Analysis and/or FAS
- ☐ PCR-DNA: STRs (Basic/Advanced)
- ☐ Time Management Skills
- ☐ Fire & Explosion Investigations
- ☐ Gunshot Residue (Hand and/or Other Surface)
- ☐ DNA: Extraction/Quantitation
- ☐ Leadership/Management Training
- ☐ Firearms Safety
- ☐ Gunshot Residue (Distance Determinations)
- ☐ Molecular Bio and/or Biochem and/or Genetics
- ☐ Supervisory Skills for Technical Persons
- ☐ Firearms Armorer's School
- ☐ Explosives Residue Analysis
- ☐ Forensic Statistics for DNA Analysis
- ☐ General Criminalistics Case Review for Supervisors
- ☐ Conversion to Fully Auto Weapons
- ☐ High Explosives
- ☐ DNA Case Review for Supervisors
- ☐ Stress Management
- ☐ Pathology of Wounds
- ☐ Energy Dispersive Xray

- ☐ TRACE
- ☐ Clan Lab Safety/Safety Officer
- ☐ Research Methods/Recordkeeping incl. Photography
- ☐ Scanning Electron Microscopy
- ☐ Glass, Paint or Headlamp Exam
- ☐ Testimony Skills (General or DUI), Public Speaking or Communication Skills
- ☐ Bloodstain Pattern Interpretation (Basic/Advanced)
- ☐ Instrumentation/Spectral Interpretation (specify: GCMS/IR/EDX/HPLC/LCMS)
- ☐ Biological Factors in Soil, Pollen and or Botanical Traces
- ☐ Ethics
- ☐ Statistics
- ☐ Shoeprints/Tiretracks (Exam and/or Collection)
- ☐ Disaster Planning and Emergency Preparedness (Last Offering)
- ☐ COMPUTERS
- ☐ QUESTIONED DOCUMENTS
- ☐ Microscopy-PLM (Intro/Advanced)
- ☐ Lab Ventilation or Design & Layout (Last Offering)
- ☐ Data Evidence Recovery
- ☐ Machine Printing/Paper & Inks
- ☐ Hairs/Fibers and/or Animal Hairs & Feathers
- ☐ Lab Safety (Last Offering)
- ☐ Digital Imaging
- ☐ Smart Cards/Financial Fraud
- ☐ Soil-Mineral Grain ID
- ☐ CAD or simplified computerized crime scene diagrams (Visio)
- ☐ NEW - TEXTILE FUNDAMENTALS: fiber&fiber properties; filament&spun yarn formation; fabric formulation systems; color&dyeing; chemical&mechanical finishing
- ☐ Your choice:
- ☐ Your choice:
- ☐ Your choice:
- ☐ Your choice:
- ☐ Your choice:
- ☐ Your choice:
- ☐ Your choice:

Name _____ Phone _____
_____ Agency _____
CAC Member (Yes) (No) Criminalist (Yes) (No)

Return completed survey Friday, Nov. 3, 2000
Patricia Lough
1401 Broadway MS 725
San Diego, CA 92101.

Fall CAC Meeting Registration Information

96th Semi-Annual Seminar, Hilton Hotel, Glendale, October 10-14, 2000
Betsy Swanson, LAPD/SID, 555 Ramirez St., Space 270, Los Angeles, CA 90012.

Full Registration: Includes all paper sessions, lunch on Thursday and Friday, and a banquet ticket. Additional banquet/lunch tickets can be ordered (see below).

Pre-registration (Full) —After September 10

Member \$225 Student* (Affiliate member) \$45

Non member \$225 Student* (Non member) \$60

*Note that lunch and banquet tickets are not included with student registration.

Daily Registration: Adv. registration includes lunch each day registered except Sat. Banquet tickets are not included.
After September 10, 2000

Member \$90

Non member \$90

Workshops: Lunch is included for full-day workshops only.

Blood Alcohol (Full-day Workshop – October 11)

Member (\$55) Non member (\$75)

Entomology (Full-day Workshop – October 11)

Member (\$80) Non member (\$100)

Forensic Anthropology (Afternoon Workshop – October 11)

Member (\$30) Non member (\$45)

Fluorescein Workshop (Morning Workshop – October 11)

Member (\$30) Non member (\$45)

DNA Workshop (Full-day Workshop – October 11)

Member (\$55) Non member (\$75)

WORKSHOPS

All workshops will be held on Weds, October 11. Lunch is included for full-day workshops only.

BLOOD-ALCOHOL WORKSHOP (Fee \$55/member \$75/non member) **FULL-DAY**

Marcelline Burns, one of the research pioneers in the physiological effects of alcohol on the human body, will present a variety of topics in the morning session. These will include information on the validation of the Grand Rapids Study, impairment at low blood-alcohol levels and field sobriety tests. The afternoon session will consist of a moot court with well-known experts including a judge, prosecutor, defense attorney and criminalist.

ENTOMOLOGY WORKSHOP (Fee \$80/member \$100/non member) **FULL-DAY**

Ever wanted to participate in a decomposition study? Now's your big chance! World-renowned entomologist Dr. Lee Goff will conduct this one-day workshop. The morning session will be a lecture covering human decomposition, forensic entomology, collection, preservation and identification of forensically important arthropods and case studies of the dead and the living. The afternoon will be a hands-on session in the laboratory, covering the collection and fixation of specimens and insect identification. (Participants will be handling live pupae [i.e., maggots], so be prepared!)

FORENSIC ANTHROPOLOGY WORKSHOP (Fee \$30/member \$45/nonmember) **AFTERNOON**

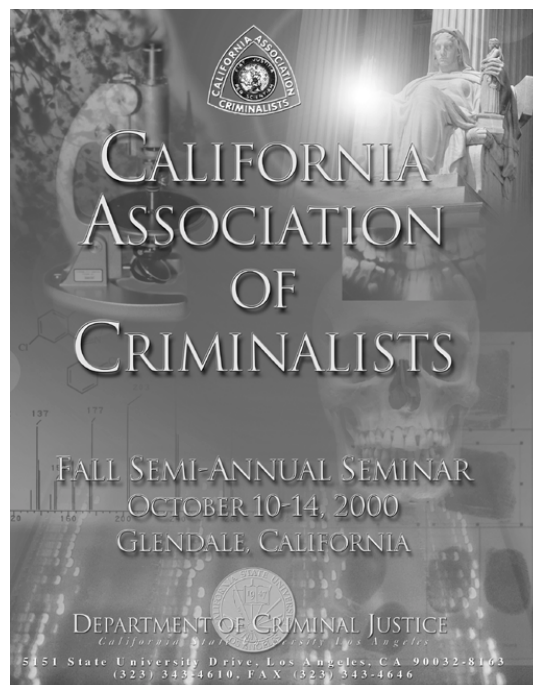
How would you like to be able to identify that bone that your dog dug up in the backyard? Anthropologists Dr. Judy Suchey and Dr. Beth Miller will conduct a half-day workshop on Forensic Anthropology. The topics will include excavation and scene analysis, and the search, recovery, and analysis of human remains.

FLUORESCHEIN WORKSHOP (Fee \$30/member \$45/non member) **MORNING**

Fluorescein or luminol? That is the question. Come to this workshop and then you make the call. Charlene Marie from the California Department of Justice's Santa Barbara Lab will conduct a workshop on the use of a new formulation for fluorescein. This new formulation removes some of the hazards and drawbacks of the old formulation.

DNA WORKSHOP (Fee \$55/member \$75/non member) **FULL-DAY**

STR/Capillary Electrophoresis is a hot topic right now. This full-day workshop will include the following presentations, with STR/CE as the central theme: interpretation issues, testimony, validation studies, and case studies.



The Star Report: Observation of a Second Firing Pin Impression

Nancy D. McCombs

KEY WORDS: CARTRIDGE CASE, STAR PISTOL, FIRING PIN IMPRESSION

Abstract

An unusual impression was observed on cartridge cases fired from an ill-fated 9mm Star pistol. The impression, located above the firing pin drag mark, was identified as a second firing pin impression. Initially this occurrence was thought to be unique to this pistol. However, a second firing pin impression was observed on cartridge cases fired from various models and calibers of Star pistols.

Introduction

Rifling characteristics on the surface of bullets have long been used to help identify the manufacturer of suspect weap-

ons. In more recent years, characteristic markings on fired cartridge cases have also proven useful in identifying or predicting the manufacturer of suspect weapons. Information derived from both bullets and cartridge cases is a powerful combination that can significantly reduce the number of candidate weapons.

Often the markings observed on fired cartridge cases are artifacts and bear no particular significance. Occasionally, cartridge case marks are uniquely characteristic of a particular manufacturer. In one instance, cartridge cases fired from an ill-fated Star pistol revealed some very unusual and reproducible impressions.

Background

On March 17, 1990, a 43-year-old man committed suicide with a 9mm Star pistol. Eight years later his son used the same Star pistol to fire several shots at a police SWAT team during an arrest attempt. One officer was killed by a bullet that found its mark through an armhole in his bulletproof vest. In return, over 60 shots were fired at the 16 year-old boy by the remaining members of the SWAT team. Subsequent examinations linked the 9mm Star pistol to two additional assaults and an attempted homicide.

Examination

A very curious mark was found on cartridge cases fired from the 9mm Star pistol. Along with the familiar characteris-

Table 1: Presence and position of second firing pin impression and presence of "cat's ears"

<u>Cartridge Case</u>	<u>Caliber</u>	<u>Model</u>	<u>Presence of 2nd FP Impression</u>	<u>Position of 2nd FP Impression</u>	<u>Presence of "Cat's Ears"</u>
1	.380	*	No	—	Yes
2	.380	SA	Yes	12	Yes
3	.380	SS	Yes	1	Yes
4	.380	SA	Yes	1	Yes
5	.38	*	Yes	12	No
6	9mm	BM	Yes	12	Yes
7	9mm	BM	No	—	Yes
8	9mm	SA	Yes	1	No
9	9mm	*	Yes	1	Yes
10	9mm	AS	Yes	12—1	Yes
11	9mm	*	No	—	No
12	9mm	*	Yes	1	Yes
13	9mm	Super	No	—	No
14	9mm	*	No	—	No
15	9mm	BM	Yes	11	Yes
16	9mm	B	Yes	11—12	No
17	9mm	SA	Yes	1	Yes
18	9mm	*	Yes	1—2	No
19	.45	*	No	—	No
20	.45	Firestar	Yes	1	Yes
21	.45	Firestar	Yes	12	No
22	.45	SA	No	—	Yes
23	.45	PD	No	—	No
24	.45	*	No	—	No

* Model not recorded by examiner

tics commonly associated with cartridge cases (extractor, ejector, firing pin, chamber and breechface marks), was an additional impression. The impression was usually circular or hemispherical, and was located above the firing pin impression generally between twelve and one o'clock. Upon further examination, this mark was determined to be a second firing pin impression. (Figure 1)

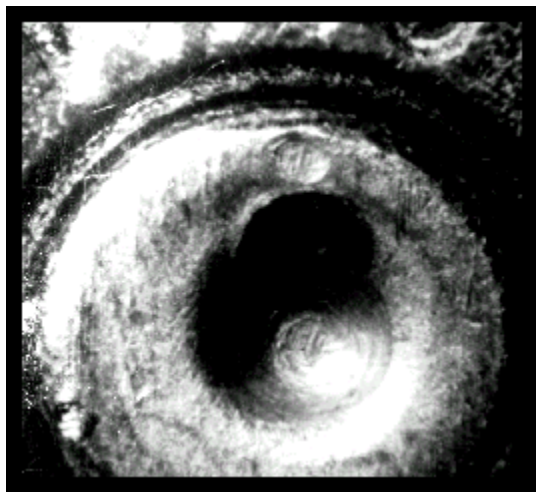


Figure 1: Image of second firing pin impression produced by a Star model BM

A logical assumption is the additional firing pin impression stems from some kind of aberrant characteristic unique to this particular pistol. However, this premise is false. Fired cartridge cases from several 9mm Star pistols were examined. The majority of these pistols displayed a second firing pin impression on the cartridge cases. Star pistols from various other calibers also displayed this peculiar impression. While this mark has been previously observed on 9mm cartridge cases from one model of Star pistol, it was described as an "unknown mark." [3]

Star pistols are also notorious for primer shearing. During the unlocking of the breech, a portion of the primer is shaved off by the coarse edges of the firing pin aperture producing two triangular shaped toolmarks above the firing pin impression. Combined, the two triangles and the firing pin impression resemble a cat's head and consequently have been dubbed "cat's ears."

Cartridge cases from 24 Star pistols were examined for the presence of a second firing pin impression and/or "cat's ears." The cartridge cases were obtained from Laboratory test fires dating back as far as 1976 or generated from Laboratory reference pistols.

As depicted in Table 1, the existence of a second firing pin is independent of caliber, model or the presence of "cat's ears." The second firing pin impression was usually positioned at twelve or one o'clock and was produced by well over half the Star pistols in this study.

Discussion

Dual firing pin impressions are commonly produced by .22 rimfires, and pistols utilizing a blowback design with a firing pin ejection mechanism, such as the 9mm Stallard Arms. [3] It is interesting that the CZ model 83 pistol, which has a blowback design with a separate ejector, has also been reported to produce a second firing pin impression. [4, 5] Star pistols, however, utilize a Browning locked-breech design and have a separate ejector. Double firing pin impressions are not usually produced by pistols having this type of mechanism.

Although the exact cause of the second firing pin impression has not been determined, one possible explanation is the firing pin spring inherent to the Star pistol causes the firing pin to "bounce" off the hammer and strike the cartridge case more than once. To test this theory, the firing pin spring was replaced with a spring from a firearm that did not produce a second firing pin impression on its fired cartridge cases. Despite the changed spring, two firing pin impressions were still observed on the fired cartridge cases. In fact, a second firing pin impression persisted even when the firing pin spring was completely removed.

In Star pistols and the CZ model 83 pistol, the firing pin protrudes slightly from the breech face when the hammer is down. [5, 6] In other words, the firing pin never fully retracts. Therefore, the second firing pin impression most likely occurs when pressure from the expanding gases force the cartridge case back against the breech face, where it re-contacts the projecting firing pin.

Summary

A second firing pin impression together with "cat's ears" represent sub-class characteristics that strongly point to a Star pistol as the suspect weapon. If sufficient detail exists, the second firing pin impression provides additional toolmarks that can assist in obtaining an identification.

References

1. Hamman, John, California State Department of Justice, Fresno Laboratory, Personal Communication
2. Hooper, Steven, Sprint PCS, Internet Communication
3. Kennington, Robert, The Matrix: 9mm Parabellum and Personal Communication
4. Eaglefield, Mike, CZ U.S.A., Personal Communication
5. Koffman, Avi, and Howard Silverwater, "Double Firing Pin Strike of the CZ Model 83 Pistol-Study of the Phenomenon," *AFTE Journal*, Vol. 31, No. 1, Winter, 1999, pp. 36-42.
6. National Rifle Association. *NRA Guide to Firearms Assembly*. NRA Press, 1980. Book II: Pistols and Revolvers; Star Model BS Pistol by Ludwig Olsen, p. 477.
7. Spatola, Josh and Ray Silva, California Criminalistics Institute, Personal Communication

Acknowledgment

The author would like to thank Andrea Van der Veer De Bondt of the Fresno County Sheriffs Department Laboratory for her assistance with the editing of this paper.



ON
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BEING A
•
STUDENT
•
AND A
•
TEACHER

A rare glimpse
of the man who
keeps winning all
those awards

by Luke Haag

Luke Haag

The recent receipt of the Roger Greene award at the Spring 2000 CAC Seminar was a very special event in my life. As the banquet approached I jotted down a few things I wanted to say in an effort to express my appreciation, to reminisce a bit after 34 years in the field and to attempt to explain how it could be that I could possibly receive such an honor.

Although I seem to have acquired a certain skill for giving technical papers, I discovered that receiving an award is not something I do well. To be sure the experience was humbling but it was also embarrassing. Embarrassing because I think many people, including those responsible for choosing me to receive this award, must think I am particularly intelligent or scholarly. For those that believe this, let me set the record straight. I simply write about things in which I am very interested and involved. I dearly enjoy carrying out practical research related to case work. Once concluded it only seems appropriate to pass my findings and observations on to others.

Yet upon receiving the award, I was somewhat at a loss. I'm sure I chose some of my words poorly and was somewhat awkward and disjointed in my delivery. I know when I sat down I realized that there were things I wanted to say and did not. This letter is an effort to supplement my recent comments.

I also believe some of what I have to say may be beneficial to new or younger members. For the other members what I have to say may explain some things, provide some pleasant reminiscences and give me a more formal means of saying thanks to some special people in my life.

Mentors, Models and Reflections

My father. My fondest childhood memories are of the many hunting and fishing trips with my father in central Illinois. In the Fall, we would walk for a hour or so in the frosty woods with the crunch of fallen leaves under foot listening for the distant bark of red squirrels in the forest- the quarry of the day. With the coming of winter, we would hunt rabbits along hedge rows after new-fallen snow. I would walk until I could not feel my feet any longer and my hands were too cold to cock the hammer on my very own single-shot shotgun. These things remain vivid memories and I still have the shotgun. At the conclusion of these outings we would often engage in a little target practice then drive to some roadside diner for a belated breakfast. The smell of strong coffee, homemade cinnamon rolls, cooked bacon and pipe smoke from the many farmers frequenting these wonderfully American institutions were all a part of this experience. There, in their bib overalls and engineer caps, we would watch and listen to them cuss the government and the weather (never to their liking), have our own discussions and eventually return home at which time the guns were carefully cleaned and put away.

Spring and summer brought trips to various relatives' farms which meant target practice down at the pond or creek without having to be cold. My favorite uncle would put dimes

in the crack of an old picnic table behind the house with the understanding that if I could knock them out with my Red Ryder BB gun, they were mine. But if I missed, they remained his until next time. I got very good with that BB gun and I still have it to this day.

My dad taught me many things: some were simply how to use tools, how to fix things, how to drive, how to fish, how to track game and how to shoot. But most important was responsibility. Firearms were something to enjoy, to own and to respect for their power of life and death. I may have fanatized about defending our home against attack by mobsters passing through between Chicago and St. Louis (we just didn't have crime where I lived), but I never considered using a gun to hurt or threaten someone. In those days (the late 1940's and early '50s) firearms were much more accessible than they are today yet neither I nor my friends ever contemplated using them to terrorize others or to commit a crime. There were guns in most of my friends' home and every farmhouse I visited. In the latter, they were usually loaded and propped in a corner of the laundry room or back porch. Taking or even handling such guns without permission was not done and gun accidents were very rare. I was more concerned about what my father would do and the great disappointment I would have been to him if I were to have misused one of these guns, including my trusty Red Ryder. Before I even reached my teens I owned a single shot 22 rifle and a 20 gauge top-break shotgun. My maternal grandmother had also given me a 32 caliber 5-shot revolver and a few cartridges that had belonged to her father. Schools and churches had rifle teams up until the 1960s and possibly later. I shot competitively in my junior and senior years of high

school in California and there was even a rifle team at Cal in 1961! Through all these years my father was my best friend until the day he died in 1988.

Mr. Hall and Sunni Bloland. When I started high school, I would often arrive early at Mr. Hall's classroom after he had just concluded a senior chemistry class. Some experiment or demonstration would frequently be on the table at the front of the classroom. Whenever I would inquire about it he would take the time to explain it and leave me looking forward to the day I could be in his class. I went on to become a chemist because of the interest he took in me and the enthusiasm he had for learning.

At Cal Berkeley I met another teacher who became a life-long friend and occasional house guest to this day. Like Mr. Hall, it was Sunni Bloland's passion for her subject and her willingness to spend considerable personal time with her students that left a deep and lasting impression on me. I long ago came to realize that to be a good criminalist, you must be a good teacher. The qualities of a

good trial witness are also those of a good teacher. If you are passionate about your work as they were, it will show. The preparation and presentation of papers at professional meetings is an important aspect in developing ones communicative skills which are so necessary to be an effective witness in court.

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After leaving Cal I took Dwayne Wolfer's two semester criminalistics course at Long Beach State College. It was as a result of him inviting me down to the LAPD lab to discuss criminalistics, to see the lab and meet Ray Pinker that I knew this is what I wanted to do. I could combine my hobby and interest in shooting with my training in chemistry. The only matters that remained were finding a job in a crime lab and surviving the ordeals of court.

During this time, I attended several CAC meetings at the suggestion of Dwayne Wolfer. This led to meeting Jack Cadman, Tony Longhetti, Lowell Bradford, Larry Ragle, Jim Brackett and a number of other senior members of the CAC. Among these, it was Jack Cadman who next encouraged me and set an example to strive for. Whenever I think of a model of the quintessential forensic scientist, it is Jack Cadman that comes to mind. I regret that there are apparently no videotapes or films of the many papers he has given for newcomers to the field to see.

Movies and Film Role Models

For the most part, there seems to be few films worth watching these days although occasionally one does come along. Films about personal courage, commitment and sacrifice especially appeal to me. Among my favorites are *Sgt. York* with Gary Cooper (the true story of a humble backwoodsman, conscientious objector and American's most decorated hero of WWI), *Mr. Smith Goes to Washington* with Jimmy Stewart, *Dead Poet's Society* with Robin Williams and *Mr. Holland's Opus* with Richard Dryfus. The latter two films depict very special teachers in the same league as Mr. Hall and Sunni Boland.

For those members that are still trying to image how a young boy could have a healthy interest in guns, watch for the film *A Christmas Story* starring Darren McGavin and Peter Billingsly as the owlish little boy in a Midwestern town in the late 40's wishing for a Red Ryder BB gun for Christmas. This movie is usually aired every year just before Christmas (usually only on local stations). It is as close to a biography of this writer as one could hope for.

Contemporaries. There are a number of CAC members who have, at various times, inspired me. It is for one or more of the following reasons that this is so. They are either much more thoughtful, insightful, philosophical or simply much more intelligent than your recipient. John DeHaan's special enthusiasm for fire/arson investigation have never waned and he is still a pleasure to watch at CAC Seminars. Any time his name appears on a program I would urge new members to attend so that they can witness, first hand, 'how it's done'.

Read anything and everything John Thornton has written and you will see my point. What you won't know are the observations he has made at past meetings. One of these was a simply enough statement but they were words to live by insofar as our professional lives. John once said, "It's not your evidence or my evidence but the court's evidence which we hold in trust should the court choose to accept it."

At a Northern CAC Seminar where he received an award, Ed Blake said something I promptly wrote down on a napkin and subsequently memorialized on a wall in my office: "If, in your analysis, you do not consider reasonable alternative explanations for an event, what you are doing is not science."

The late Gene Wolberg of the San Diego Police Department Crime Laboratory is my final hero. Besides being my closest personal friend, Gene had the special courage to take on

politicians, bureaucrats, legislators and media representatives who regularly lie to the public in the furtherance of their particular agendas. When the facts did not support their claims, Gene was quick to challenge them- something we should all do as a part of basic good citizenship and something that was especially courageous on his part as a government employee.

Advice. By this point it should be clear that I think that it's of critical importance that for one to succeed and excel in this field one needs to find something about which to be passionate and to become a teacher.

One can never be sure where a teacher's influence will go or end but the object is that the day will come when the students will outdo the teacher. And this is as it should be. All of the people I have named in this letter were passionate about their job or their role in life.

Be a student as well as a teacher. Learn as if you were to live forever. Maintain a childlike wonder about everything. Find out what others in the field are doing and how it might relate to your own area of special interest.

As for your own efforts, understand that you are not in the business of making people happy. Police officers, lawyers and politicians will seek your support for their theories, ideas,



(Above:) The author today. (Right:) December 1944 right after Christmas day. I was 4 years old. My father and I were standing on the Florida coast. I had my new cork gun and was fully prepared to repel the Huns from attacking our shores. (Preceding page:) Christmas 1946 in Springfield, Illinois. (I was now 6 years old.) This was my American Indian Movement Period and probably where Russell Means later got the idea for A.I.M. (He appeared on the cover of Newsweek magazine brandishing an AK47 at the beginning of the American Indian Movement which, I believe, was in the late 60's or early 70's.) Photos courtesy of the author.

proposed legislation and agendas. Despite your personal support for many of these matters, when the facts don't support them, you must say so. And when such individuals misrepresent such facts, you must also come forward and say so. To do otherwise is to abdicate your responsibility as a citizen and a scientist.

Do not take a jury's decision as an affirmation of your work or the correctness of your findings. If the jurors appear to understand what you did, how you did it and what your findings were this should be the test. What they do with that information should not be your concern as a forensic scientist.

The Future. For nearly all CAC members the future ap-

pears bright. Various subcultures in this country are in constant conflict and use violence to settle disputes, intimidate others and "prove" their manliness.

Films and video games promote and glorify violence. Much like flight simulators, the latter are murder and mayhem simulators protected by the First Amendment with no one (neither the creators of such material nor the parents of the viewers) accepting any responsibility for the results.

We presently live under the most oppressive, legislation oriented government in my lifetime. As a person involved in the lawful ownership and non-violent use of firearms, I have observed that whole new groups of previously law abiding citizens have been made criminals with the stroke of the legislative



Luke Haag

pen. This is particularly true in California where I would be a multi-count felon if I moved back to this state and brought my personal property with me. Even more troubling is the fact that lawmakers now find lying to the public and courts as an acceptable mode of conduct when they believe their cause is just.

For me, the future appears bleak because of my hobby and interests. I am beginning to know what it must have been like to be a Jew in Germany in the late 1930's. The Federal government and the national media take every opportunity to demonize firearms and those who own them. Their efforts are relentless. Because of my hobby and interests, the attorney general of this country has identified me as a "cult" member on one national television program. Another federal legislator has described me as "a threat to national security" because I enjoy shooting 50 caliber long range rifles. Membership in the National Rifle Association is often likened to being in the KKK. Yet I have done nothing wrong. To see where all of this will lead, fast forward your copy of Judgement at Nuremberg to the ending scene with Spencer Tracy talking to Bert Lancaster as the convicted German jurist, Ernst Janig.

Today if a citizen stops a crime, with or without the use of a firearm, he is branded a vigilante. I have done so several times

in my life without firing a shot. I was taught that it was an obligation of citizenship to attempt to prevent crime. I am convinced that my wife and I escaped injury and possibly death many years ago in the California desert by being armed at the time we were confronted by a group of thugs. Today it seems "things" are bad and are responsible for crime—not the individuals who commit them. The days of personal responsibility, accountability self-reliance and good citizenship that my father taught me are fast disappearing. Perhaps you, by being true to our profession, can have a positive effect on future events by simply adhering to the truth and let no one (including your employers) misrepresent the facts for their own personal agenda.

So now some of you may be wondering or questioning why the association bestowed this very special honor and award upon me. Given the foregoing admissions and personal revelations, you may be thinking- How can we get it back? Well, you'll get my Roger Greene Award when you pry my cold, dead fingers—(you know the rest of the line from the bumper stickers you have seen).

Thank you all for this very special award. I look forward to seeing you at many CAC Seminars to come.

Luke Haag lives in Carefree, Arizona



"I SEE YOU GOT A 74 IN YOUR CHEMISTRY FINAL, AND STILL YOU CALL YOURSELF AN EXPERT WITNESS."

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Networking Happens.



Callco Press

Getting involved in society meetings and courses can yield more than just time away from the lab. It's where you'll form contacts with others in your field and where you can share concerns about casework, administration and the direction of the criminalistics profession.

Upcoming meetings & Courses

Northwest Association of Forensic Science
Oct. 9-13, 2000, Seattle, WA

California Association of Criminalists
Oct. 11-14, 2000, Glendale, CA

Mid Atlantic Association of Forensic Science
Oct. 16-20, 2000, Chicago, IL

Canadian Society of Forensic Science
Nov. 1-5, 2000, Ottawa, Ontario, Canada

Southwest Association of Forensic Science
Nov. 6-10, 2000, Colorado Springs, CO

American Academy of Forensic Sciences
Feb. 19-24, 2001, Seattle, WA

Northeast Association of Forensic Science
Oct. 11-14, 2000, Saratoga Springs, NY

International Association of Identification
Oct. 20-22, 2000, Lake Ozark, MO.

International Association of Identification
Oct. 29- Nov. 2, 2000, St. Petersburg, FL.

California Association of Toxicologists
Nov. 10-11, 2000, San Diego, CA

Preservation/Collection of Footwear/Tire/Tread Evid.
Oct. 2-4, 2000, Denton, TX

International Assoc. of Bloodstain Pattern Analysts
Oct. 4-6, 2000, Tucson, AZ

Firearms & Tool Marks ID II
CCI, Oct. 2-6, 2000

Technical Writing for Criminalists
CCI, Nov. 1-3, 2000

Courtroom Presentation of Evidence
CCI, Dec. 6-8, 2000

Casework Review Clinic-Controlled Subs
CCI, Nov. 8-9, 2000

Footwear Impression Evidence: Detection Recovery & Exam.
CCI, Oct. 16-20, 2000

Detection/Recovery: Footwear & Tire Impression Evidence
CCI, Oct. 23-25, 2000

Tool Mark Criteria for Identification
CCI, Oct. 23-27, 2000

Basic Practical Microscopy
CCI, Nov. 13-17, 2000

Bloodstain Pattern Interpretation
CCI, Nov. 6-10, 2000

Glue Traces on Cotton Swabs in Sexual Assault Kits

Robert D. Blackledge

From telephone discussions with Stewart Hung, a graduate student in the Forensic Science program at John Jay College of Criminal Justice, New York City, I have been alerted to the fact that glue traces may be extracted from the cotton swabs found in sexual assault kits. Stewart was working as an intern in the New York City Medical Examiners Office. As a part of his thesis project he examined those swabs from sexual assault victims where no traces of seminal fluid had been detected. Using my published¹⁻⁴ methods, he examined the swabs for traces of polydimethylsiloxane (PDMS), the silicone oil used in many brands as a condom lubricant. He was examining cotton tipped swabs present in the sexual assault kits used throughout New York State. In some cases (but by no means all), he extracted traces of the glue used to make the cotton adhere to the wooden shaft. If traces of PDMS were present but at very low levels, the FT-IR spectrum produced by the glue made a positive identification of the PDMS traces difficult.

In my research and casework up to that time I had not encountered that problem. Because it would be needlessly expensive to open up a sexual assault kit every time I needed some swabs for research purposes, I have used the Puritan® brand (Hardwood Products Company, Guilford, Maine), which come in bags of 100.

However, I was recently asked to examine for condom lubricant traces a vaginal swab that originated from a Victim Sexual Assault Kit provided by the California Department of Justice. Although I found no traces of PDMS lubricant (nor did a microscopic exam reveal any cornstarch grains also associated with the condom brand in question), I obtained an FT-IR spectrum similar to vinyl acetate (Figure 1).

I called the detective who had submitted the swab and asked him if he could send me a control swab (unused swab) from one of the CA DOJ Victim Sexual Assault Kits. He said he could send me the extra swab (unused) from the kit that had been used in that case. He did (actually a factory-sealed paper package with two swabs), and also sent two other swab packages of the same brand but different lot numbers. In Figure 2 are the FT-IR spectra produced when one-half of a swab was cut off, extracted with chloroform, and the chloroform extract deposited on a 3M FT-IR Card (porous polyethylene). To eliminate any other possible sources I also obtained spectra of the blank card and of neat chloroform deposited on the card and allowed to evaporate (not shown).

All of the swabs from the CADOJ kits were "Pur-Wraps® Sterile Cotton Tipped Applicators" that come two per sealed paper package and are also made by the Hardwood Products

Company. Looking at the spectra in Figure 2, you can see that the amount of glue extracted varied considerably from swab to swab.

I called the 1-800 number on the Pur-Wraps® package and spoke with William Young, their QA/QC Supervisor. He was very cooperative and very much interested in helping with the problem. I learned that the following steps occur in making the swabs: 1) a glue wheel places glue around the end of the stick that will receive the cotton; 2) the cotton is wrapped around the end of the stick; 3) a binder (sodium carboxymethyl cellulose) is added to the cotton so that it will not become "too fluffy" when it gets wet.

A different machine makes the "Puritan®" (100/pkg.) swabs, and any one of several machines may make the "Pur-Wraps®". All of a given lot number are made on the same machine, but the amount of glue on a swab may vary even within a lot number. They do make some swabs (for industrial purposes) that do not contain any glue, but the cotton easily comes off the stick. They also make some swabs where the cotton is attached using a different adhesive. This is a hot melt adhesive that is applied at 200 degrees F. Mr. Young will be sending me some of these swabs to test, as well as some swabs made from polyurethane that use a dacron adhesive.

In the meantime, just be aware of this possible interference. Usually the amount of glue extracted is at a very low level (look at the % Transmission ranges in the figures). The condom lubricant, PDMS, is a very strong absorber in the midrange IR, so usually its spectrum would predominate. Also, the glue is concentrated where the cotton is closest to the wood shaft, while any traces from condom lubricants should be predominately on or near the surface. In cutting the cotton away try not to cut too close to the shaft. Although not the best solution, one could also use spectral subtraction (subtract the spectrum of an extract from a control swab) from your sample.

Lastly, I'd like to make a comment about sample preparation technique. Last year I was asked to review a chemist's notes where a vaginal swab had been extracted and examined by FT-IR for condom lubricant traces. This chemist elected to use an FT-IR microscope rather than the bench. My laboratory has an FT-IR microscope and it is a marvelous instrument. On samples like tiny paint chips, after squashing them between diamonds we can get some truly outstanding spectra. However, I would not use the FT-IR microscope to examine a solute contained in a volatile solvent that I had extracted from a substrate (vaginal swab, crotch of panties, etc.).

The reason for this is the "coffee ring effect."^{5,6} Say you have a solute dissolved in a liquid (coffee is just one example), spill a drop of it on just about any substrate (except Teflon®) and the following will happen: the drop will spread out (only on Teflon® would it form a bead); as the solvent evaporates the solute comes out of solution (it may or may not form crystals) and the solute is deposited on the substrate in a ring. In the middle of the ring will be little if any solute. Therefore, this is not a good method of concentrating your sample for microscopic examination.

Instead of using the FT-IR microscope, I would use the bench. Although other substrates could be used (KBr or NaCl disks, etc.), for convenience and ease of record keeping I prefer the 3M IR Cards®. First, I use the blank card to obtain and save a BACKGROUND spectrum. I've extracted my sample with a volatile solvent (chloroform or methylene chloride) and then allowed the solvent to evaporate until only a drop or two is left. Then, using a 10µL syringe I would deposit a tiny drop in



Robert D. Blackledge won the Al Biasotti Most Outstanding Paper Award at the recent CAC Seminar. He can be reached at: NCISRFL-San Diego, 3405 Welles St Ste 3, San Diego, CA 92136-5018. e-mail: rblackle@ncis.navy.mil

the center of the sampling area of the card. I would allow this drop to evaporate (takes only a few seconds) before depositing any additional drops in the same location. With this technique I can deposit my sample within a circle having a circumference approximately like that on a rubber eraser on a typical lead pencil. Sure, I still get the coffee ring effect, but now my entire sample is within the sample beam of the instrument.

References:

1. Blackledge, Robert D. "The Identification of Condom Lubricant Traces on Evidence from Sexual Assaults," *The CAC News*, Fall 1993, 4-7.
2. Blackledge, R. D. and Vincenti, M. "Identification of Polydimethylsiloxane Lubricant Traces from Latex Condoms in Cases of Sexual Assault," *J. of the Forensic Science Society*, 34(4), 245-256 (1994).
3. Blackledge, Robert D. "Collection and Identification Guidelines for Traces from Latex Condoms in Sexual Assault Cases," *Crime Laboratory Digest*, 21(4), 57-61 (1994).
4. Blackledge, Robert D. "Condom Trace Evidence - A New Factor in Sexual Assault Investigations," *FBI Law Enforcement Bulletin*, 65(5), 12-16, May (1996).
5. Ikeda, Masahiko and Uchihara, Hiroshi, "Liquid Sample Condensation Technique Using Perfluorated Polymer FILM for Picogram Analysis by FT-IR" *Applied Spectroscopy*, 46(9), 1431-1434 (1992).
6. Deegan, RD; Bakajin, O; Dupont, TF; Huber, G; Nagel, SR; Witten, TC, "Capillary Flow as the Cause of Ring Stains From Dried Liquid Drops," *Nature*, 389, 827-829 (1997).

* * Reserve Space in a CAC-Sponsored Class * *

(CAC members only)

CCI Footwear Impression Evidence

Instructor: William Bodziak
October 16-20, 2000 at CCI

CCI Tire Impression Evidence

Instructor: William Bodziak
April 2-6, 2001 at CCI

CCI Technical Writing

Instructor: Ann Neumann, MA, JD
Fall 2000 or Spring 2001

CCI Toolmark Criteria for Identification

Instructors: John Murdock and Frederic Tulleners
October 23-27, 2000 at CCI

CCI Basic Practical Microscopy

Instructor: B. Schnek
Fall 2000 or Spring 2001

CCI Interpretation of IR Spectra

Instructor: Robert L. Julian, Ph.D.
September 26-27, 2000 at San Diego

CCI Bloodstain Pattern Interpretation

Instructor: : Jerry Chisum
November 6-10, 2000 at CCI

CCI Crime Scene Investigation II

Instructor: TBA
Fall 2000 or Spring 2001 at CCI

Please submit your applications for training to CAC and CCI as soon as possible to be considered for these courses!

"I attest that I satisfy any prerequisites necessary to attend the class and I understand that CAC members get first priority in filling the class."

Signature: _____ Date: _____

Print Name _____

Address _____

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Phone: (213) 989-5003 Direct Fax: (323) 415-1810

JOHN **SIMMS**

Quality Assured

Bits & Pieces

In this column, I do not have an overall theme. Rather, I have assorted bits of information that I hope you find either helpful or interesting.

Study Group Activities

The Southern California Quality Assurance Study Group took on a new role over these last few months. We conducted a quality system audit of one of our member laboratories. We ran the audit using both ASCLD/LAB criteria and specific laboratory policy. We spent about two weeks writing the report with an edit process involving numerous e-mails back and forth. The QA group closed the audit with a very successful effort on behalf of all of its members. Other member laboratories will be going through a similar external audit of their QA system this fall. We are currently working on a general template that will be applicable to any QA system.

FBI Audit Class Helpful Hints

Many members of the Southern California Quality Assurance Study Group happened to have been invited to attend the FBI's Effective Audits class in July. I have 30 pages of detailed notes if you are interested, but here are a few highlights:

- Anyone doing audits knows that it is not uncommon for audit issues to extend over a year and into the next audit cycle.
- Audits can be vertical (using all criteria in one unit at a time) or horizontal (using only one criteria in many lab units at a time).
- You should check your manuals for all the wills, musts, and shalls, to build a unit specific audit checklist.
- Your best technical person is not necessarily your best auditor.
- The difference between documents and reports is that documents tell you how to do something, and records are documentation that show you actually did it.
- A new national DNA audit document will be out by the time of this publication. It was created by the FBI in con-



From the perspective of quality assurance, crystal tests can and do meet all the general requirements of any test method.

junction with DAB. It will be the standard tool for any DNA unit audit.

· The 180 day rule for DNA proficiency testing seems to have a new interpretation. It is measured from the due date of the provider to the issue date of the next test. The issue date can apparently be defined by the laboratory.

The Far Reach of Our QA Network

The study group started off with a small network on the internet just to help us stay connected on a regular basis. We can pose questions and receive immediate responses from several viewpoints without having to wait until the next meeting or make twenty phone calls. This network has now grown to encompass QA Managers from coast to coast, making it now a truly national network. In fact, it is now so big that our original Southern California group is using a simple e-mail group to stay connected more locally and ensure greater confidentiality of our issues.

C.S.I.

Crime Scene Investigation is a new television program on CBS this fall. It is also the newest accredited discipline. This will be perhaps the greatest challenge yet to the accreditation process due to so many different job titles and functions being involved. Evidence technicians are involved in photography and collection. Criminalists may be involved in both documentation and crime scene reconstruction. Either or both may be involved in some sort of processing

at the scene. The education required and job functions are widely varied and therein lies the challenge.

If anyone is planning to go through this voluntary accreditation program in the very near future, please contact me to share your experiences. I can present them here so all can learn from your first experiences. We are brimming with curiosity to see how it is going to work.

Who will be the first?

Flammables

As you all know by now, CTS has dropped the flammables test samples. Packaging nightmares has caused no end of problems for all of us involved in arson testing. Correct results that did not match manufacturer's data went into the books as wrong answers. Certainly, remediations were initiated against some analysts even though they may have been exactly right with their analysis on the samples they received. After a long and difficult road, CTS has formally announced it is dropping the flammables as a test but still carrying them only in a research capacity. Word is that Bill Tillstone's group (NFSTC) will be issuing their version of a flammables proficiency test. If anyone else knows of an approved carrier for arson samples, please speak up so we all might benefit.

ISO

ASCLD/LAB is going to have a training session on ISO at their next meeting (which will have already taken place by the time you read this). If your boss has been talking ISO at you, this is the explanation for it. My next column will deal with the ISO issues and where we might be headed with all this.

My contact information is:

Email: tzfan@yahoo.com

Work: 619-531-2576

Cell: 619-886-1171 (daytime only)

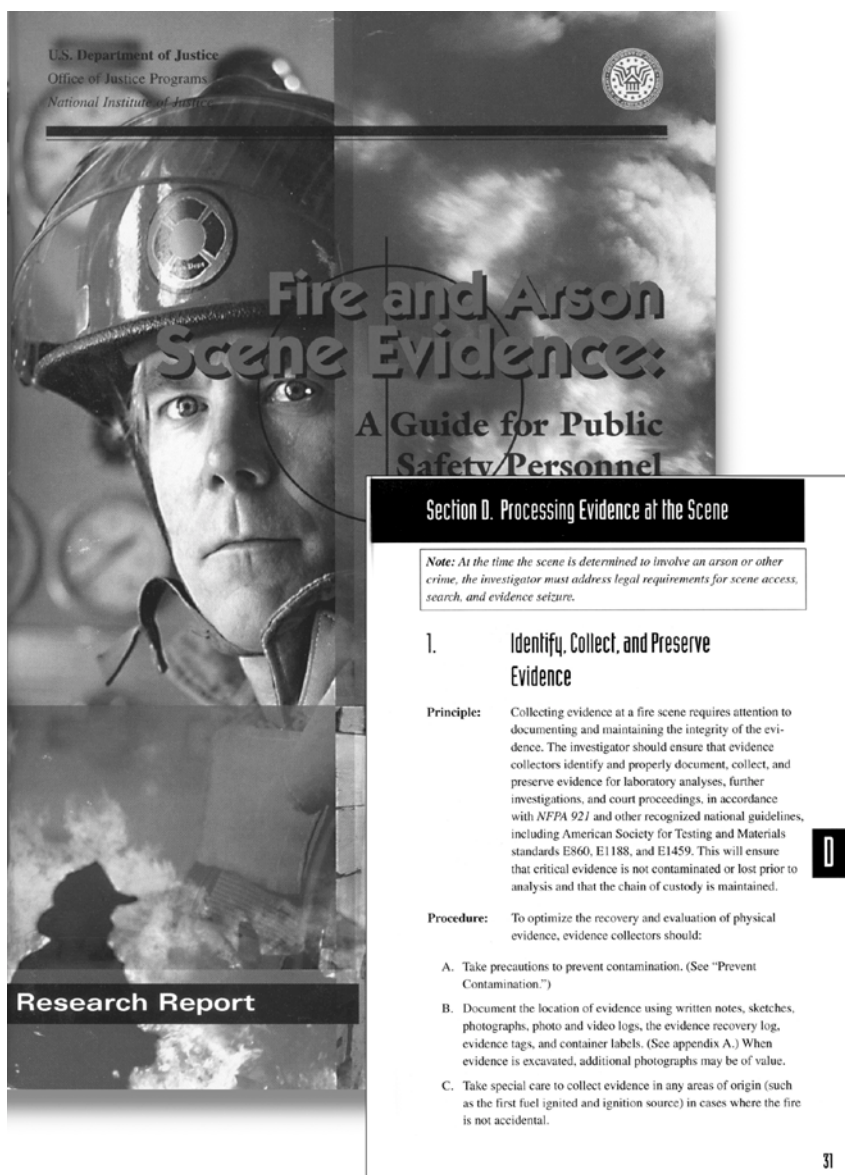
John

New Publication From USDOJ to Aid Fire Investigation

A research report was made available this June by the US Dept. of Justice, National Institute of Justice (NIJ) that should aid investigators in the collection and preservation of fire debris evidence.

The report, aimed at public safety personnel, was developed by the Technical Working Group on Fire / Arson Scene Investigation (TWGFAFI). Dr. John DeHaan was among the editors who worked on the project. Additional help was provided by the University of Central Florida's National Center for Forensic Sciences.

The sixty-four page report is available from NIJ's website at www.ojp.usdoj.gov/nij/pubs-sum/181584.htm



And Now, A Word From Our Members: A Few Humorous Bits

Some of this is probably way out, but nonetheless, it is rather intriguing! The US Standard Railroad Gauge Did You Know This???? The US Standard railroad gauge (distance between the rails) is 4 feet, 8.5 inches. That's an exceedingly odd number. Why was that gauge used? Because that's the way they built them in England and the US railroads were built by English expatriates. Why did the English people build them like that? Because the first rail lines were built by the same people who built the pre-railroad, and that's the gauge they used. Why did "they" use that gauge then? Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel spacing.

Okay! Why did the wagons use that odd wheel spacing? Well, if they tried to use any other spacing the wagons would break on some of the old, long distance roads, because that's the spacing of the old wheel ruts. So who built these old rutted roads? The first long distance roads in Europe were built by Imperial Rome for the benefit of their legions. The roads have been used ever since. And the ruts? The initial ruts, which everyone else had to match for fear of destroying their wagons, were first made by Roman war chariots. Since the chariots were made for or by Imperial Rome they were all alike in the matter of wheel spacing.

Thus, we have the answer to the original question. The United States standard railroad gauge of 4 feet, 8.5 inches derives from the original specification for an Imperial Roman army war chariot. Specs and Bureaucracies live forever. So, the next time you are handed a specification and wonder what Horse's Ass came up with it, you may be exactly right. Because the Imperial Roman chariots were made to be just wide enough to accommodate the back ends of two war horses.

Now the twist to the story: There's an interesting extension of the story about railroad gauge and horses' behinds. When we see a Space Shuttle sitting on the launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are the solid rocket boosters, or SRBs. The SRBs are made by Thiokol at a factory in Utah. The engineers who designed the SRBs might have preferred to make them a bit fatter, but the SRBs had to be shipped by train from the factory to the launch site. The railroad line to the factory runs through a tunnel in the mountains. The SRBs had to fit through that tunnel. The tunnel is slightly wider than a railroad track, and the railroad track is about as wide as two horses' behinds. So a major design feature of what is arguably the world's most advanced transportation system was determined by the width of a horse's ass!

Paul Herman Sr. Systems Analyst Alaris Medical Systems
(Submitted by Frank Cassidy)

From an actual newspaper contest where entrants ages 4 to 15 were asked to imitate "Deep Thoughts" by Jack Handey.

I believe you should live each day as if it is your last, which is why I don't have any clean laundry because, come on, who wants to wash clothes on the last day of their life? —Age 15

Give me the strength to change the things I can, the grace to accept the things I cannot, and a great big bag of money. —Age 13

It sure would be nice if we got a day off for the president's birthday, like they do for the queen. Of course, then we would have a lot of people voting for a candidate born on July 3 or December 26, just for the long weekends. —Age 8

Democracy is a beautiful thing, except for that part about letting just any ol' person vote. —Age 10

Home is where the house is. —Age 6

I often wonder how come John Tesh isn't as popular a singer as some people think he should be. Then, I remember it's because he stinks. —Age 15

For centuries, people thought the moon was made of green cheese. Then the astronauts found that the moon is really a big hard rock. That's what happens to cheese when you leave it out. —Age 6

My younger brother asked me what happens after we die. I told him we get buried under a bunch of dirt and worms eat our bodies. I guess I should have told him the truth—that most of us go to hell and burn eternally— but I didn't want to upset him. —Age 10

When I go to heaven, I want to see my grandpa again. But he better have lost the nose hair and the old-man smell. —Age 5

I don't know about you, but I enjoy watching paint dry. I imagine that the wet paint is a big fresh water lake that is the only source of water for some tiny cities by the lake. As the lake gets drier, the population gets more desperate, and sometimes there are water riots. Once there was a big fire and everyone died. —Age 13

As you make your way through this hectic world of ours, set aside a few minutes each day. At the end of the year, you'll have a couple of days saved up. —Age 7

Often, when I am reading a good book, I stop and thank my teacher. That is, I used to, until she got an unlisted number. —Age 15

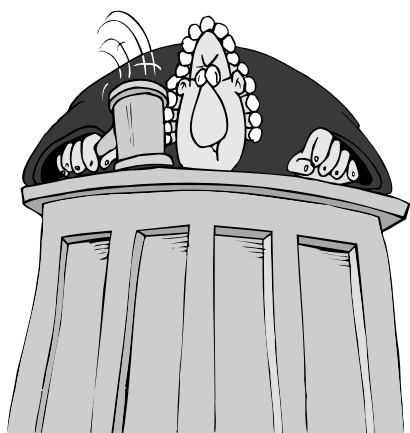
It would be terrible if the Red Cross Bloodmobile got into an accident. No, wait. That would be good because if anyone needed it, the blood would be right there. —Age 5

Think of the biggest number you can. Now add five. Then, imagine if you had that many Twinkies. Wow, that's five more than the biggest number you could come up with! —Age 6

The only stupid question is the one that is never asked, except maybe "Don't you think it is about time you audited my return?" or "Isn't it morally wrong to give me a warning when, in fact, I was speeding?" —Age 15

Once, I wept for I had no shoes. Then I came upon a man who had no feet. So I took his shoes. I mean, it's not like he really needed them, right? —Age 15

If we could just get everyone to close their eyes and visualize world peace for an hour, imagine how serene and quiet it would be until the looting started. —Age 15



Courtroom Calamities

After a long afternoon on the witness stand, I was excused. As I stepped down from the witness chair, I fell, catching myself on the bench.

Judge: "What is the matter?"

Criminalist: "Your honor, I have no feeling in my right leg."

Judge: "Members of the jury we shall take a short recess until Mr. Chisum regains control of his leg."

—Jerry Chisum

When testifying in one of my first trials, after I had identified the green leafy substance as marijuana, the prosecutor moved to have the evidence admitted. The judge then explained to the jury what it meant to admit evidence, after which time he told them they may take the evidence into the jury room and "use it."

—Stan Dorrance

After an exhausting week of field calls contributing to my lack of sleep, I was called to court with an excruciating headache to testify in a breath case. The defense attorney asked me seemingly endless bizarre questions including several electronic and physics questions, not necessarily relevant to the case. As I rubbed my throbbing head.

Attorney: "What happens to the electrons in an intoxilyzer 5000 antenna when it receives a radio signal? Sir, why are you rubbing your head is the question to difficult for you?"

Criminalist: "No, it's just that you're giving me a real headache."

—Mark Traugher

Please send your tales of juris imprudence to the CACNews editor at mccombsn@hdcdojnet.state.ca.us

Ageless Wisdom From Our Readers

How It All Began

An old, bearded shepherd, with a crooked staff, walked up to a stone pulpit and spoke:

And lo it came to pass in those days that the trader by the name of Abraham Com did take unto himself a young wife by the name of Dot. And Dot Com was a comely woman, broad of shoulder and long of leg. Indeed, she became known as Amazon Dot Com.

And she saith unto Abraham, her husband, "Why doth thou travel far, from town to town, with thy goods when thou canst trade without ever leaving thy tent?"

And Abraham didst look at her as though she were several saddle bags short of a camel load, but simply said, "How so Dearest?"

And Dot saith, "I will place drums in all the towns and drums in between to send messages saying whatsoever you have for sale and they will reply telling you which hath the best price. And the sale canst be made on the drums and delivery made by Uriah's Pony Stable (UPS)."

Abraham thought long and decided he would let Dot have her way with the drums.

And the drums rang out and were blessed with immediate success. Abraham didst sell all the goods he had, at the top price, without ever moving from his tent.

But his success didst arouse envy in the heart of man. And lo, a man named Maccabia did secrete himself inside Abraham's drum and was accused of insider trading. And the young man didst take to Dot Com's trading as doth the greedy horsefly take to camel dung. They were called Nomadic Ecclesiastical Rich Dominican Siderites, or NERDS for short.

And lo it came to pass that the land was so feverish with joy at the new riches and the deafening sound of drums, that no one noticed that the real riches were going to the drum maker, one Brother William of Gates, who bought up every drum company in the land. And indeed didst insist on making drums that would only work if you bought Brother Gates' drumsticks.

And lo, Brother Gates purchased up the drum operators signals (DOS) and wouldst not teacheth the signals to any save they paid his price.

And Dot didst say, "Oh, Abraham, what we have started is being taken over by others". And as Abraham looked out over the Bay of Ezekiel, or as it came to be known, "eBay", and he saith, "We need a name of a service that reflects what we are."

And Dot replied, "Young Ambitious Hebrew Owner Operators."

"Whoopee!", saith Abraham.

"No, YAHOO!", sayest Dot Com.

J. Ted Evans, Jr.,

ammended by: Brad Johnson, Sacramento.



CALIFORNIA ASSOCIATION OF CRIMINALISTS

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