

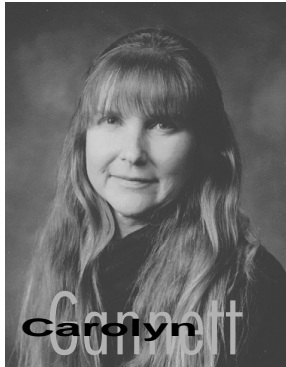
The CAC News

News of the California Association of Embroiderers • Summer 1997



The President's Desk

Help Wanted



I would like to thank the membership for the opportunity to serve in the capacity of President. I am looking forward to working with each and every individual who is willing to volunteer their efforts to further the Association's endeavors.

This organization has always set high goals. Reaching them has afforded the CAC its reputation as a prestigious association, one that continues to serve at the forefront of the Forensic Science community. The CAC developed the first certification program in Criminalistics, was the first professional Forensic Science organization to have a written Code of Ethics and Enforcement of Code of Ethics, was instrumental in helping to develop TWGDAM guidelines, and provides funding for research and training through the A. Reed and Virginia McLaughlin Endowment Fund. These are just a few highlights of the contributions made by this Association.

Yet it is of paramount importance to realize that such accomplishments are not reached by some abstract organizational body. They are achieved by the voluntary efforts of individual members—people who choose to donate their time, energy, unique talents, hard work, and even money to further the state of the profession. Often these achievements have been spearheaded by just one or two individuals who had an idea and were willing to put forth the time and effort to see it accomplished. The reputation of this organization is a direct result of the efforts of each of these members.

Do you have concerns regarding the content of

meetings, CAC policies, or CAC practices? Is there something you think the Association should be doing but isn't, or vice versa? Have you ever been concerned that the same few people always seem to be granted positions within the Association?

If so, do something about it! This is *your* Association. Its function is not simply to grant

you privileges and benefits in exchange for a membership fee. It is here to allow you the opportunity to make a difference in your profession. Use the CAC to voice your opinion, contribute your talents, engage in a project, or work towards a goal. If the same few people are continually granted positions in the CAC it is simply because they have continually volunteered and have served your Association well.

I would like to see our pool of movers and shakers, workhorses, and visionaries expanded. If you would like to utilize the CAC to make a difference in your profession, contact me. Share with me your concerns, but also propose solutions. Tell me how you would like to contribute in order to achieve goals you think are worthwhile. Even if you feel you can only participate to a "small" degree, your efforts are valuable and greatly appreciated. Hopefully you will find your participation as rewarding and satisfying as those of us who continue to contribute year after year.

I look forward to hearing from you. I will do my best to accommodate any individual willing to volunteer. You can reach me by e-mail at CGannesh@SDSheriff.com, or by phone at (619) 467-4406.

Carolyn



The CACNews

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On the cover...

Luke Haag demonstrates shooting reconstruction at the recent Spring Seminar in Sacramento. More pictures inside.

Summer 1997

C O N T E N T S

Departments	2	The President's Desk Incoming President Gannett
	4	CACBits / Section Reports Distinguished member wanted / FSS gift / New member welcome / Treasury / Insider
	5	Jobs / Meetings / Courses Positions Wanted / Offered
Opinion	6	Editorial page / Letters Raymond Davis / Feedback
Special	7	Shooting Scenes Pix from Luke's class
	8	Sact'o Smiles Snaps from a seminar
Features	9	An Ethical Discussion Reprise in memory of Parker Bell
	14	Q & A Black Talon ammo explained
	17	Leftovers Potpourri
	18	Boltcutter Toolmarks Frank Cassidy demonstrates an unusual effect
	22	A Final Word

1997 Distinguished Member Award

The Awards Committee adds **Faye Springer** to this impressive list of Distinguished Members:

<i>George Sensabaugh</i>	1983	<i>Dorothy Northey</i>	1990
<i>Jan Bashinski</i>	1984	<i>Edward Rhodes</i>	1991
<i>Edward Blake</i>	1985	<i>Peter Barnett</i>	1992
<i>Jim White</i>	1986	<i>John Murdock</i>	1993
<i>Jerry Chisum</i>	1987	<i>John Dehaan</i>	1994
<i>Lucien Haag</i>	1988	<i>Hiram K. Evans</i>	1995
<i>John Thornton</i>	1989	<i>Anthony Longhetti</i>	1996



Pete Barnett presents Faye with the award

The California Association of Criminalists presented Faye Springer with the Distinguished Member award at the Spring Seminar held in Sacramento. Faye is a criminalist with the Sacramento County Laboratory of Forensic Services. To be considered for this award a candidate must significantly contribute to the

Association. During her 27 year career, most of it with the California Department of Justice, Faye has made significant contributions to the Association including: authoring many technical papers, notes and bulletins; chairing the 68th semiannual CAC seminar; serving as President of the CAC in 1987, CAC representative and advisor to TWGMAT and recently winning "Best Paper" at the Sacramento CAC seminar.

Faye has performed all manner of case work from blood alcohol and narcotic analysis to firearms and impression evidence to crime scene processing and reconstruction to her specialty trace evidence. Those who know Faye comment on her diligence in the profession of forensic science. She can spend countless hours examining all types of trace evidence submitted on complex, challenging and difficult cases. Faye embodies the qualities of the professional, unbiased and selfless criminalist that we hold important when awarding a person as Distinguished Member. She is always ready to offer help, advice and to share her vast experiences with other criminalists. The CAC is proud to honor Faye Springer with the CAC's 1997 Distinguished Member Award. She will join a very special group of previous award winners.

— *Shanin Sullivan, Awards Committee Chair*

Gift to FSS displayed

A specially handcrafted gift depicting Sherlock Holmes' study in miniature was displayed at the recent CAC Board of Directors meeting in May. The gift (see photo at right), scheduled to be presented to the Forensic Science Society at the summer meeting in Harrogate, England, was made by Danville, California resident Jeffrey Bishop at Pete Barnett's request.

cont'd on page 15



Jobs • Meetings • Courses



SWAFS offers in-depth Summer Seminar

GC/MS Theory & Interpretation

August 4-6 1997

The Southwestern Association of Forensic Scientists is planning a GC/MS seminar which will offer more indepth information than is usually presented at the annual meetings. Topics include: basic chromatography, operational theory of quadrapole ms, operational theory of ion trap ms, ms/ms, basic concepts of ms interpretation. Data handling exercises will be used. A live instrument will be on site for student samples.

The seminar fee will be \$150. This is a bargain compared to the over \$300 for a similar course offered by a private vendor. The class will be limited to 40 students. SWAFS members will be given priority. However, after June 1 the class will be opened to the general forensic community, to ensure expenses are met. The seminar will be held at the Tempe Mission Palms Hotel (1-800-547-8705) in Tempe, AZ, a Phoenix suburb. The Mission Palms is walking distance from numerous restaurants, theaters, night clubs and shopping locations. Room rates will be honored August 3 though 6, include a continental breakfast each morning. The hotel also offers reduced rate green fees for hotel guests. Reservations must be made no later than July 6, 1997. After this date room availability can not be guaranteed. When making reservations let the hotel know you are with the **SWAFS MASS SPEC TRAINING SEMINAR** to ensure you get the proper rate. for more information, please contact Donn Christian, Arizona Department of Public Safety, PO Box 6636, Phoenix, AZ 85005-6638, FAX (602) 223-2913.

Laboratory Supervisor-Criminalist

Charleston, SC Police Dept. has an opening for the position of Lab. Supervisor. Salary is based on experience and the position is open until filled. Qualifications include a bachelor of science in forensic science, criminalistics, chemistry, or biochemistry from an accredited college or university. Preference will be given to individuals with an advanced degree. Experience in a crime laboratory setting

is required. Selected candidates must pass a comprehensive background investigation including a polygraph. Must possess a valid driver's license. Duties: Performs instrumental and chemical examinations to analyze and identify various types of physical evidence. A primary duty is the examination for the presence of controlled substances. Also performs forensic testing on evidence such as body fluids, fire debris, explosives residues, hairs and fibers. Prepares reports on analytical results for use by the criminal justice system and testifies in court as an expert witness. Demonstrates knowledge of general forensic science, criminal court procedures, rules of evidence, and laboratory safety and quality assurance practices. Personnel are expected to attain ABC certification. In addition, Laboratory Supervisor is responsible for administrative aspects (supervision, evaluation, budgeting etc.) of laboratory operation. For an application, contact Personnel Division, Charleston Police Department, 180 Lockwood Blvd., Charleston, SC 29403, (803)720-2402. Inquiries: Judith A. Flynn, Forensic Services Director, (803)973-7270.

Unverified internet listing

MAFS Meeting Announced

The 26th Annual Meeting of the Midwestern Association of Forensic Scientists will be held October 13-17, 1997 at the Hotel Fort Des Moines, Iowa.

Contact: Sandra Stoltenow or Paul Bush, Iowa Division of Criminal Investigation Crime Laboratory, Wallace State Office Building, 502 E. 9th Street, Des Moines, Iowa 50319, Tel. 515/281-3666, Fax: 515/242-6297.

CAT / NWAFS / SWAFS / SAT Joint meeting

The Las Vegas Metropolitan Police Department Forensic Laboratory and Associated Pathologists Laboratories will be co-hosting a joint meeting of the California Association of Toxicologists (CAT), Northwest Association of Forensic Scientists (NWAFS), Southwestern Association of Forensic Scientists (SWAFS), and the Southwestern Association of Toxicologists

(SAT) on November 3-7, 1997, at the Monte Carlo Resort and Casino in Las Vegas, Nevada. Rooms are available for attendees at a special rate of \$64 per night plus tax. For reservations and more information please contact: Hotel Reservations: Monte Carlo Resort and Casino, Reservations Department, (800) 311-8999, (702) 730-7777, Reservation Code - XCAT. Local Arrangements: Dr. Ray Kelly, Associated Pathologist Laboratories, (702) 733-7866 x406, email kelly@apllabs.com or Randy Stone, LVMPD Forensic Lab, (702) 229-3941, email: 75123.225@compuserve.com.

1997 SOFT Annual Conference

The Society of Forensic Toxicologists has chosen Snowbird, Utah for their 1997 annual Conference, to be held from October 5-9, 1997. The host is the Center for Human Toxicology, University of Utah, (801)581-5809, Webpage: <http://lysine.pharm.utah.edu/~dcrouch/SOFT97.html>

University Extension Offers New Course in Forensic DNA Typing

University Extension, UC Davis, introduces a new nine-session course that provides a comprehensive introduction to the fundamentals of classical, molecular and population genetics. Participants will learn the applications utilized specifically for practicing forensic DNA analysis. Combining lecture and laboratory demonstrations, **Genetics of Forensic DNA Typing**, will explore the forensic applications of DNA technology to the detection and analysis of DNA polymorphism used in case work and data banking. Included are the principles underlying methods used to isolate, quantitate and analyze DNA from biological materials (including RFLP and PCR) that enable the detection and analysis of polymorphic regions. This course is offered Tuesday, September 2 through Friday, September 5 and Monday, September 8 through Friday, September 12, 8:30 A.M. - 4:30 P.M., at the Berryessa Room, Department of Justice, 4949 Broadway, Sacramento, and is presented with the assistance of the California Department of Justice.



Can You Read This?

I'm not sure you want to. While attending the recent seminar in Sacramento, I casually asked some people how they liked the spring issue. It seems there are a lot of CAC members who don't read the CACNews. I found that no one had read it. So I decided to take a small, unscientific poll and asked ten people at random if they had read the last issue. None had and three of them said that they never even opened the envelope the CACNews arrives in! The reason this bothers me is twofold. First and foremost is that if you don't read and/or contribute to our news magazine, then you won't think it's worth spending the \$10K per year it takes to publish it. Second, for those who take the time to offer their thoughts, ideas, techniques and general information will no longer send in material for publication. I mean, why bother if no one is interested in reading these articles. I want you to know that a lot of effort goes into each and every issue. I know that there is a great deal of scientific literature competing for your time. Some of that material is piling up on your desk just as you read this. Most of it is vital to the work we perform and you have to admit that it's dry, impersonal and on a bad day, down right unreadable. For example, do you find the Mandelbrot Set an interesting paradigm for fractal analysis in mathematical study? I personally find the concept difficult to work into a conversation. I encourage you to read the CACNews, make contributions to the CACNews, tell your non CAC friends & colleagues about the CACNews and give the contributors to the CACNews some feedback on their articles. One young man however, went out of his way to introduce himself and thank me personally

for the last issue. I could feel a warm fuzzy feeling begin to spread all over me. The one outweighs the ten. Thank you.

For those who did not have the opportunity to attend the CAC seminar in Sacramento, let me tell you that it was one of the best planned and managed seminars I have ever attended. **Ann Murphy** and **Jeff Herbert** along with the staff at the Sacramento County Crime Laboratory performed magnificently in hosting this seminar. They faced an even greater challenge than most chairs by also hosting the National Institute of Justice seminar on Tuesday and Wednesday prior to the CAC seminar. I heard many flattering comments ranging from the quality of the program to the venue site (Radisson Hotel), the food and service, the unending supply of raffle prizes and finally to the Black and White Ball. An informative and good time were had by all. The only work I had to perform was as a judge for the Best Paper presented by a CAC member. That meant I had to sit through the DNA papers. I had to fight the urge to run and seek cover as I sat and listened to these papers. It's a challenge to listen to DNA papers when I have no background for it. I know my DNA friends cringe when they hear some of the firearms and trace papers being presented. Still, I found it an interesting experience. **Fay Springer** won the award for best paper which she coauthored with **Renee Montgomery**. I want to mention that during Renee's portion dealing with the blood/DNA work, she made several references to DNA tests she ran and then attempted to explain in simple terms what those tests were. I did not find her explanations at all helpful, however I really appreciated the fact that she tried to be helpful. I often struggle to come up with elegant and simple explanations to help jurors understand the tests I conduct in my work. I realized from Renee's example that if we just *attempt* to be helpful we can go along way in being credible and believable. My congratulations to Fay Springer and Renee Montgomery for the Best Paper at the CAC seminar "The Sam Strange Case." And it was!

Personal thanks to **Nancy McCombs**, Fresno DOJ lab and to **Bruce Moran**, Sacramento County Laboratory of Forensic Services.

* * *

WELCOME ABOARD: To our new members recently elected to the CAC Board of Directors. They are: **Joe Hourigan**, Los Angeles Police Department

Crime Lab as Regional Director South and **Ron Nichols**, Oakland Police Department Crime Lab as President Elect. I am personally looking forward to working with Joe and Ron over the next two years. BON VOYAGE: Saying good-bye to **David Stockwell**, San Bernardino Sheriffs Crime Lab and to **Carol Hunter** of LOFT Management (Formerly of CAL LAB). Thanks Dave and Carol for your service and tour of duty on the board. By the way, for all the new members as well as those seeking membership, take a moment and read Carol's article in this issue.

Starting with the next issue, I will be publishing the musings and commentary of my friend and colleague **Richard Konieczka**, of Sound Communication. Richard is one of the facilitators at the CCI "Courtroom Presentation of Evidence" class and a nationally recognized public speaker. Richard provides business commentary to his clients on a quarterly basis which so happens to fit the CACNews publication schedule. For those who know Richard, his humor and insights will make reading his articles worth your time.

Welcome home to all of those who attended the joint meeting of the Forensic Science Society and the CAC in Harrogate. I'm hoping someone will write about the conference and send it into the CACNEWS. Also, please send in any photos you would like to see included for our members to enjoy. It will be greatly appreciated.

continued on page 21

From the Reader

Advertising Pays

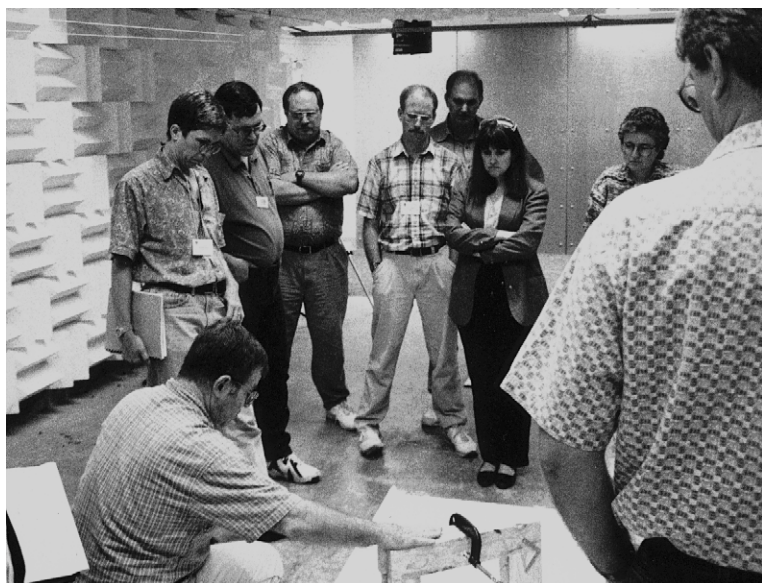
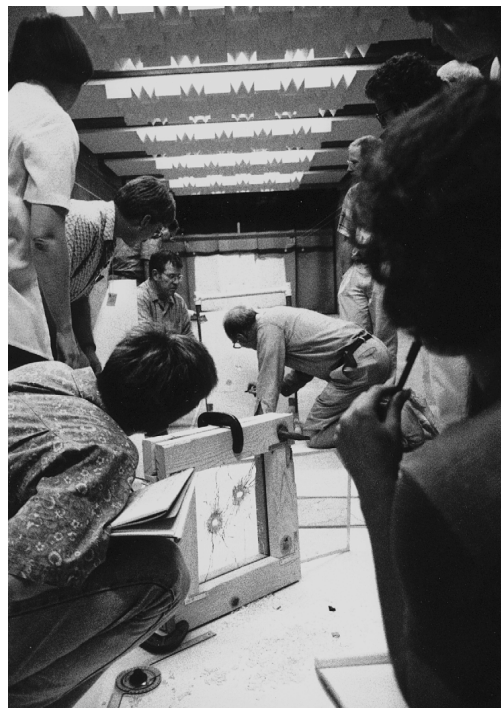
We have recently hired three criminalists (City of Tulsa, OK) for our forensic laboratory: two serology/DNA analysts and a firearm/tool mark examiner. Our good fortune in hiring them may be as a result of your assistance.

Thank you for placing our job announcement in your publication. Consider this my request to remove these announcements.

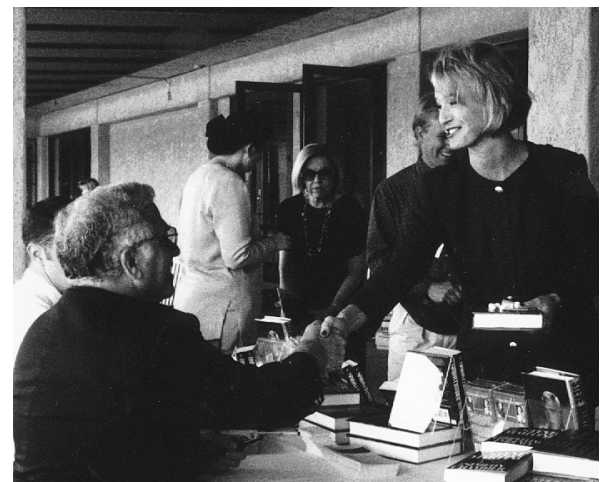
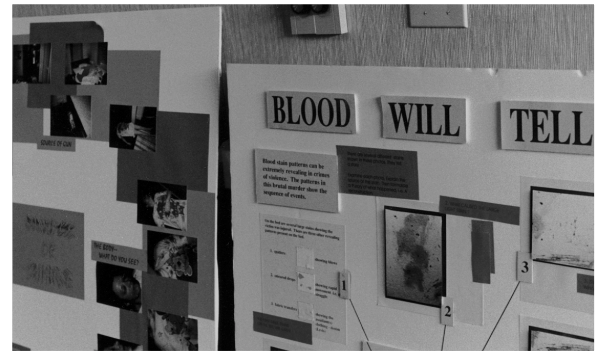
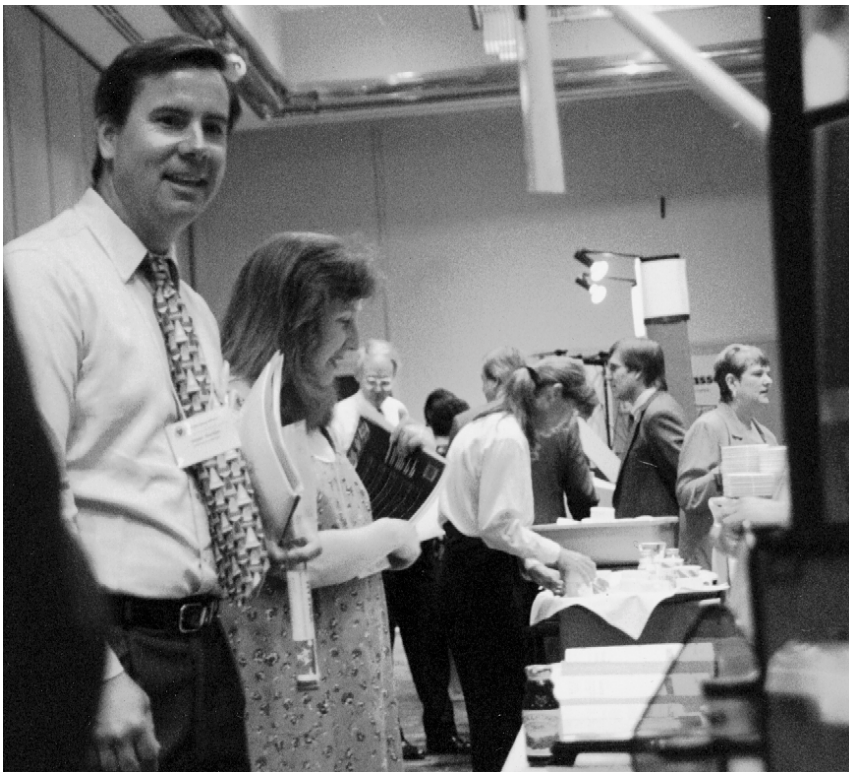
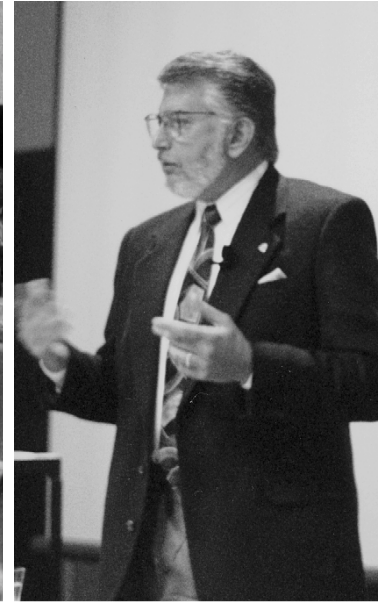
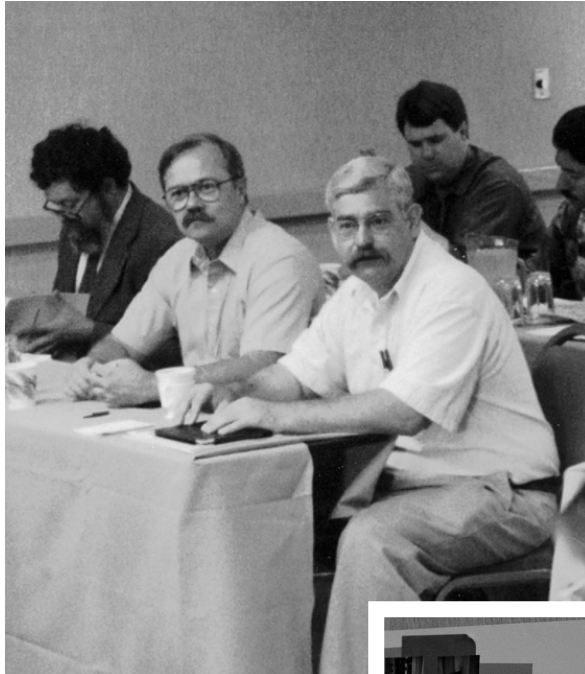
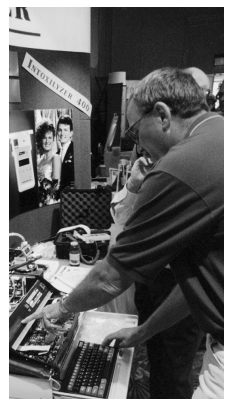
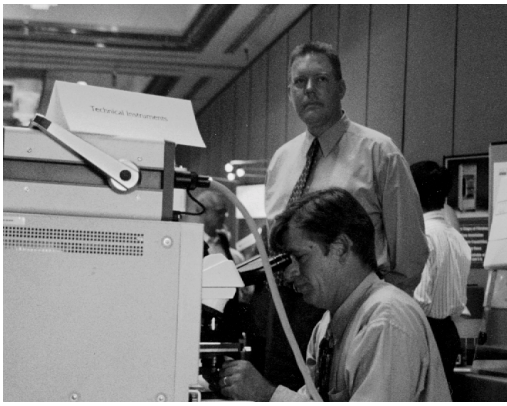
Keep up the good work. It is this kind of information dissemination that is so important in our profession.

Thank you for your kind assistance.

Carla M. Noziglia
Laboratory Director



Shooting scenes. The Spring '97 seminar featured several workshops including "Shooting Reconstruction", taught by Luke Haag.



Check out all the smiles. Views from the Spring Seminar held at the Radisson in Sacramento.

An Ethical Discussion

by Parker Bell

Several years ago Peter Barnett wrote a series of ethical dilemmas for the CAC Newsletter. Many of his hypothetical cases stimulated a great deal of discussion within the CAC over the interpretation of different sections of the Code of Ethics. Some members have missed such discussion in the past few years, and the following hypothetical is offered in the hope that such lively discussions can be revived.

Facts: A homicide has occurred in a bar. At trial two different versions of the events emerge: under the prosecution theory the facts would support a first degree murder conviction; the testimony of the defendant would support a finding of self defense. The trial ends with a hung jury. The prosecution then retains a criminalist to review the evidence and advise the prosecutor whether either story is consistent with the physical evidence. The defense counsel retains a different criminalist for the same purpose. Both criminalists rely upon the crime scene description, photographs and diagrams to reach their conclusions. Neither believes that it would be necessary or beneficial to conduct any analytical tests on any of the evidence.

The criminalist retained by the prosecution reaches the conclusion that either version would be possible. The criminalist retained by the defense attorney concludes that only the prosecution theory is not possible, but the defendant's story is consistent with the physical evidence. After obtaining the permission of the defense counsel to do so, the criminalist retained by the defense contacts the criminalist retained by the prosecution to discuss the bases for their relative opinions. The prosecution criminalist refuses to meet with the criminalist retained by the defense, stating that since the matter is set for retrial and since the prosecutor had made an offer of settlement to the defense attorney, it was up to the defense attorney to decide if the offer would be accepted or not. Therefore, it would

not be appropriate for the criminalist to discuss the case. The criminalist retained by the defense is offended by this attitude and feels that it is inappropriate for a criminalist. He then drafts a letter to the prosecution criminalist in order to document his offer to discuss the case; his purpose is to aid the defense attorney in cross-examining the prosecution criminalist, to show his bias. The letter reads as follows:

Dear Mr. X:

This letter will document our recent telephone discussions. I called you and indicated that it appeared that we had a difference of opinion in the homicide reconstruction in this case. I offered to meet with you and discuss the case in an effort to see if we could resolve our differences. You indicated that you would not meet with me. If your recollection of these events differs from mine, please advise me.

Sincerely, Y

The prosecution criminalist responds with the following:

Dear Mr. Y:

In reference to your letter, please be advised that my recollection differs from yours.

Sincerely, X

Issues: The C.A.C. Code of Ethics provides (Article IV, Section C) as follows:

It shall be regarded as ethical for one criminalist to reexamine evidence materials previously submitted to or examined by another. Where a difference of opinion arises, however, as to the significance of the evidence or to test results, it is in the interest of the profession that every effort be made by both analysts to resolve their conflict before the case goes to trial

Does the refusal of the prosecution criminalist to meet with the criminalist retained by the defense constitute a violation of this section? Or is the section only intended to apply to differences of opinions relating to analytical results, or only to those situations where one or both of them has actually analyzed the evidence? If, for example, there is a difference of opinion between two criminalists as to whether a brown powder is heroin, the jury is in a poor position to determine which of them to believe. If the issue is, instead, homicide reconstruction, the criminalists ought to be able to articulate their reasons to the jury in terms that the jury can understand. On the other hand, if criminalists give differing interpretations of events based on the same facts, such disagreements do not reflect well upon the profession.



This series first debuted in 1989 and is reprinted here in memory of the author.

V. Parker Bell

A second issue is whether the criminalist retained by the defense has acted improperly in attempting to “set up” the prosecution criminalist by documenting his refusal to discuss the matter with the purpose of putting the prosecution criminalist in a bad light before the jury. Is his refusal to discuss the case a proper issue for the jury to consider, or is it an merely attempt to create a false impression in the minds of the jury that the prosecution criminalist should not be believed; i.e., is it an effort to convince the jury for reasons not related to the interpretation of the physical evidence itself?

Perhaps relevant to this second issue is Article III, Section H, which provides:

The criminalist will not by implication, knowingly or intentionally, assist the contestants in a case through such tactics as will implant a false impression in the minds of the jury.

If the defense uses the work of the criminalist in documenting the refusal of the prosecution criminalist to discuss the differing interpretations, does this imply that the prosecution criminalist is afraid to discuss his opinion and therefore such opinion is less reliable? Would the acts of the criminalist retained by the defense be of the type covered by Article IV, Section E, which provides:

It shall be ethical for one of this profession to serve an attorney in an advisory capacity regarding the interrogation of another expert who may be presenting testimony. This service must be performed in good faith and not maliciously. Its purpose is to prevent incompetent testimony but not to thwart justice.

PART 2

The ethical discussion presented in the last issue of the newsletter dealt with the obligation of criminalists to try to resolve differences of opinions before trial. The hypothetical presented below includes this same issue in a different context, along with a number of other issues.

Facts: A homicide occurs in which the victim was killed by a shotgun blast; there was no eyewitness to the killing. Cardboard wads are removed from the victim at autopsy and are turned over to the police where they are examined by Police Criminalist No. 1. These wads are

in good condition, except for being blood soaked.

Criminalist No. 1 submits a report, indicating that the wads originated from a 12 gauge shot shell. The evidence is subsequently examined by a criminalist retained by the defense, who examines the wads and realizes that they were originally fired from a 20 gauge shell. The defense attorney instructs the criminalist not to disclose the error made by Police Criminalist No. 1. The criminalist retained by the defense agrees, in part because he believes that Police Criminalist No. 1 is incompetent, and he feels that if there were a significant embarrassment, it might end the career of Police Criminalist No. 1, thereby advancing the long range interests of justice. The defense criminalist, however, is also advised by the defense attorney that the defendant had a 20 gauge

Criminalist No. 1, who voices the opinion that the blood on the wads has caused them to shrink—i.e., as the blood dried, it contracted, pulling the wad with it. The supervisor decides that Criminalist No. 1 should have the opportunity to prove the theory. However, all experiments contradict Criminalist No. 1's theory; all manipulations with the wads cause them to expand rather than to contract. Criminalist No. 1 still refuses to change the report. The supervisor then instructs Criminalist No. 2 not to disclose this error. The supervisor specifically orders Criminalist No. 2 not to discuss the size of the wads with any representative of the defense or with the district attorney; he states that the error might never come to light.

Police Criminalist No. 2 is afraid of the consequences of disobeying the order of his supervisor. He is aware that the evidence has been reexamined by a criminalist for the defense. He therefore feels confident that the error is known to the defense. Believing that his silence about the error will therefore not prejudice the defendant, he does not disobey his supervisor, nor does he go to a higher authority.

The error made by Police Criminalist No. 1 is the type which we would normally describe as that upon which reasonable minds would not disagree.

Issues: The facts of this hypothetical presents a multitude of issues. The reader may identify others, but the following are those that are the most obvious to the writer:

1. Has Police Criminalist No. 1 acted unethically in attempting to render opinions in an area in which he/she is incompetent? Is competency an ethical issue? (See Article II, Section H of the Code of Ethics)

2. Has the criminalist for the defense acted unethically in not advising Police Criminalist No. 1 of the error? (See Article IV, Section C) Is he excused from this obligation because he is instructed by the defense attorney not to do so, even though he would not have wanted to do so, even if the attorney were to allow him to? If the ultimate purpose of the Code of Ethics is to serve the ends of justice, is each criminalist free to determine what ends of justice will be served? In this case, the criminalist retained by the defense unilaterally decided that the ultimate ends of justice would be served if Police Crimi-

If the ultimate purpose of the Code of Ethics is to serve the ends of justice, is each criminalist free to determine what ends of justice will be served?

shotgun available, as well as the 12 gauge shotgun. The defense attorney also intimates that he believes the defendant did fire the fatal shot.

The defendant is a suspect in a separate case, and the district attorney requests that the evidence in the second case be compared to the evidence in the first case, seeking to find a common link. He lacks confidence in Police Criminalist No. 1 and makes a specific request that the comparison be made by Police Criminalist No. 2, who was originally assigned to the second case. In examining the evidence, Police Criminalist No. 2 realizes that Police Criminalist No. 1 has made an error in identifying the size of the cardboard wads. He first obtains a second opinion from another criminalist within the laboratory and both go to Criminalist No. 1. Criminalist No. 1 disagrees with the opinion of Criminalist No. 2. Criminalist No. 2 then informs his supervisor of the error. The supervisor discusses the matter with

nalist No. 1 did not examine evidence in the future, even though the short range ends of justice might not be served by allowing a defendant who is probably guilty to go free. If he is obligated to advise Police Criminalist No. 1 of the error, what check is there on future cases that Police Criminalist No. 1 will work on that will not be reexamined?

3. Is the action of the supervisor in ordering Police Criminalist No. 2 not to disclose the error a violation of the Code of Ethics? If so, what section or sections were violated? No section of the Code of Ethics appears to address this specific problem. Should the Code of Ethics be read like the Penal Code, where a specific section must be cited, or does it instead set a broad standard for conduct for which we can condemn actions that violate the spirit of the code, even though we may not be able to cite a specific section of the code? (See Preamble)

4. Has Police Criminalist No. 2 acted unethically in obeying the order of his supervisor? Recognizing that his supervisor will still remain his supervisor after this case, regardless of his actions, is he excused from disclosure of the error by his (correct) belief that the defense is aware of the error? Is the district attorney entitled to the same consideration as the defendant?

One's first response to this hypothetical fact situation is probably to observe that there is a severe problem of supervision in this laboratory. While that may be true, the observation of a problem of supervision does not answer the question of the ethical responsibilities of the individuals involved. Nor does it answer the question of how to protect the system from future problems of the same type. For example, would laboratory licensing solve such a problem? If so, what type of licensing examination could determine that individual criminalists would not act within areas where they are incompetent? What type of licensing would insure that supervisors would correct errors rather than cover them up? Would aggressive enforcement of the Code of Ethics serve better?

Hopefully, this hypothetical case will generate more feedback than did the one in the last newsletter. Only two responses were received. John Murdock indicated that the refusal of the prosecution criminalist to meet with the defense criminalist was a breach of the Article IV, Section C. This section applies equally to analytical and reconstruction efforts. He also did not see the letter from the defense criminalist as a set up. It makes perfect sense to document efforts to meet and resolve differences."

He saw no violation of Section III-M. "The fact that the case will or may be retried makes it even more important to try and resolve differences. The prosecuting criminalist can explain in court why he/she wouldn't discuss the case."

Lowell Bradford, on the other hand, felt that the scenario posed was flawed, in that the arrangement for discussions between criminalists should be the result of an agreement between both attorneys, not just one. "If there is such an agreement, then the prosecution criminalist would be obliged to enter the discussion because he is responsible to his client attorney. If any subsequent problems occur, the remedy is to pursue them through attorney channels. Criminalists have no business making contact between themselves unless specifically authorized by the respective attorneys. Article IV, Section C of the Ethics Code is not explicit as to the attorney role; however it is implicit that all examinations and evaluations are conducted at the request of parties in interest through their respective attorneys. Criminalists do not practice law, they assist those who do by furnishing scientific knowledge applicable to law problems. They should always try to reconcile differences of opinion, but within the context of the rules of law.

"All forensic scientists must constantly realize that they are working in two systems, each with its own rules, scientific rules and the rules of law."

PART 3

Four responses were received to the last Ethical Discussion. One of the pleasures of receiving these responses is reading the variety of viewpoints of the members of the association. Although space does not permit a copy of the full responses, the responses to the specific issues are tabulated here.

All four respondents agreed that the attorney-client privilege should supersede Article IV, Section D, which states that the privilege should apply, "except in a situation where a miscarriage of justice may occur." Steve Schliebe doubted that criminalists should make the decision as to what constitutes a miscarriage of justice. He wrote, "I don't believe we have that authority nor should we be so blatantly arrogant to assume we can take it." John Thornton suggested that this section of the Code should perhaps be amended to acknowledge that defense attorneys

may not permit the type of discussions that this section encourages.

All four responses also agreed that Criminalist No. 2, in acquiescing to his supervisor's order to remain silent about the error made by Criminalist No. 1, was violating the Code of Ethics. Philip Kellett wrote, "He tried but he has not exhausted his means to resolve the conflict. What about the supervisor's supervisor, etc.? What about the prosecuting attorney?" John Thornton also observed that both Criminalist No. 2 and the supervisor were intentionally failing to disclose potentially exculpatory evidence. He questioned whether their acts might constitute a conspiracy to suppress evidence, exposing themselves to possible criminal liability.

John Thornton also indicated that Criminalist No. 1 acted unethically, under the facts of the hypothetical, by ignoring the results of experiments. "When confronted with the issue of the size of wads by the supervisor, Criminalist 1 took the position that the wads shrank by having been blood soaked. He/she then undertook experiments to test this hypothesis, and all of the experiments indicated otherwise. Criminalist No. 1 then ignored his or her own test results and persisted in an opinion that was not supported by any scientific work. To my way of thinking, conducting tests and then throwing out the results in order to maintain what is



Answers inside back

best a surmise is in fact an ethical issue, and the Criminalist is dirty on this score."

All four responses indicated that the supervisor acted unethically, although only John Murdock cited any specific section of the Code of Ethics to support that position. He cited section IV-C—the supervisor did not facilitate a resolution of the difference of opinion as mandated by that section. He also cited the third paragraph of the preamble: "It is the duty of any person practicing the profession of criminalistics to serve the interests of justice to the best of his ability at all times." He pointed out that ASCLD now has a code of ethics for supervisors, and the supervisor's conduct in the hypothetical violated the ASCLD guidelines.

Steve Schliebe felt that licensing of labs would not solve the main problem illustrated in the hypothetical, since the issue is one of personal integrity combined with moral and ethical behavior. He suggests that self-policing by enforcement of the Code of Ethics is a more effective way to control the situation. John Thornton suggested that questions on a licensing test include issues of ethics: e.g., "Does the criminalist have a moral obligation to see to it that the court understands the evidence as it exists and to present it in an impartial manner?" If the individual answers yes, he could never justify conduct such as that described in the hypothetical. John Murdock indicated that the answer to the problem is aggressive enforcement of the CAC ethics Code as well as ASCLD's management/supervisory guidelines through the relevant professional organization or through adoption of such codes/guidelines in the manner described by Peterson and Murdock in their article in *Journal of Forensic Science*, Vol. 34, No. 3, May, 1989, pp. 749-762.

The responses differed, however, on the issue of whether Criminalist No. 1 was acting unethically by rendering an opinion in which he/she was not competent. John Thornton indicated that, in his opinion, competency is not an ethical issue. Philip Kellett wrote, "Criminalist No 1 is apparently incompetent. He may or may not be unethical. Being incorrect does not necessarily make one unethical." Steve Schliebe seemed more troubled by the issue. He wrote, "The fact that PC No.1 refused to be aware of his deficiencies and extended himself beyond his limits is a violation of Article II, Section H. This does get hazy, however, when the criminalist truly believes he has no deficiencies and performs incompetent work that

he believes is competent. Is he unethical or just plain stupid?" John Murdock, however, stated, "Incompetence is indeed an ethical issue. The person was not aware of his limitations and simple testing revealed this. A criminalist must be held ethically liable when logical common sense questions are not posed during the self-evaluation appraisal that leads to an awareness of one's limitations."

For whatever it may be worth, this writer would like to make a case in this issue that competency is an ethical issue. Part of the reluctance within the association to consider competency as an ethical issue may be that most of the sections in the Code of Ethics are directed toward what might be called "active" decisions. The issue of competency, however, might be called a "passive" decision; i.e., the criminalist does not intentionally get involved in a case in which he or she is not competent, but instead acts out of ignorance. This may be the reason that many members have taken the position that competency is not an ethical issue. However, if the wrong information is given to the trier of fact innocently, the effects can be just as devastating as if the facts are misstated intentionally.

The adversarial system of justice that exists in our society assumes that each side in the litigation will act as a check against the excesses of the opposing party. As a practical matter, it can hardly be denied that often one of the sides in the justice equation does not have sufficient knowledge or skill to make an effective challenge. Indeed, this appears to be one of the reasons for the Code of Ethics. We feel that the expertise exists within the association to determine that certain types of testimony or testing procedures are not acceptable, and the association can be more effective than the adversary system in controlling such activity. Again, this seems to be another reason that competency should be considered as an ethical issue. Unless there is a more effective tool to control incompetency, why should the association not be involved?

It has been the experience of this writer that in certain laboratories incompetent work seems to be repeated. In those cases where the opposing counsel is well prepared, such incompetence may be exposed in court. But should justice depend only on those cases where the opposing counsel is so well prepared?

Rather than speaking only in the abstract, consider the following testimony:

Q: Other than on the job training, have you

had any special training in firearms?

A: Yes, I have attended meetings of A.F.T.E.—American Firearms and Toolmark Examiners.

Q: Now, in this case the gun is a Colt .45 Government Model 1911A1, correct?

A: Yes.

Q: Can you tell me what the difference is between the 1911A1 and the 1911?

A: I don't know.

Q: Can you tell me what position the extractor is in this weapon?

A: I don't recall.

Q: Did you check it?

A: No reason to.

Q: Did you determine that the Colt pistol fired the cartridge cases in this case?

A: Yes.

Q: Can you tell me what marks you looked at to reach that conclusion?

A: I looked for firing pin impressions, looked for extractor and ejector.

Q: What about breach face marks?

A: If they're available, I look for those also.

Q: Can you tell me what you used in this case?

A: Probably a combination of all three or four of those items.

Q: Do you have any recollection specifically of what you used?

A: No.

Q: Do you have any notes to tell you?

A: No.

Q: In comparing the cartridge cases to the gun, is it important to know what caused the particular marks on the cartridge case?

A: No. The only thing that matters is that the marks be reproducible.

Q: The bullet in this case was a hollow point. Will a hollow point bullet cause more damage?

A: Yes. As the bullet goes through the air, air compresses in the hollow point of the bullet so that when it hits, the compressed air will cause the bullet to explode and cause a large entry hole.

Q: In testing the gun shot residue, does it matter how much powder was in the cartridge originally?

A: Well, I wouldn't want too much powder in the casing.

Q: Why not?

A: Because the powder needs oxygen to burn. If there's so much powder that it fills up the casing, there won't be any oxygen to support the burning.

Q: What is the test you used for powder residue?

A: Sodium rhodizonate.

Q: What is the test you used for lead?

A: Sodium rhodizonate.

Q: Have you ever heard of the Greiss test?

A: Yes, but I don't use it.

Q: What does the Greiss test test for?

A: For lead—not necessarily lead but anti-mony and barium. The sodium rhodizonate test is more sensitive, though, so I prefer it.

Q: With regard to the sodium rhodizonate test, did you use a buffer solution?

A: Of course.

Q: What buffer did you use?

A: Darn if I can remember.

Q: What color reaction is generally obtained from lead?

A: Pink.

Q: How does one make the test more specific?

A: With HCl.

Q: Did you spray with HCl in this case?

A: Of course.

Q: Was there any color reaction?

A: There is none with the HCl. It just fades out things that are not lead.

Q: Let's go to the acid phosphatase analysis. Did you do that in this case?

A: Yes, the first thing.

Q: Is acid phosphatase the same thing as semen?

A: No. It's a component of semen. It's the liquid. There are various chemical compositions, liquid and spermatozoa found in semen.

Q: If in a female a large amount, and I'm talking about in excess of 100 mIU, of acid phosphatase is found in a female, from that can a criminalist deduce that there was a male donor for that acid phosphatase?

A: I'm not exactly sure of the number of units, but any large amount of acid phosphatase, that is correct.

Q: Well, do you know how many mIU are required before one can make a deduction with respect to whether the acid phosphatase that is being found is from the prostate gland of the male?

A: No, but I've heard various levels.

Q.: What levels have you heard?

A: I don't remember.

Q: What is your opinion?

A: That I would be very cautious in my interpretation of such things.

Q: How many mIU would you have to have before you would conclude that there was a donor for the suspect fluid?

A: I wouldn't know.

Q: What conclusion, if any, did you draw with respect to the recency of the intercourse which had occurred in this case?

A: I don't think I ever really drew a conclusion.

Q: OK I'm asking you now. Can you draw one from the evidence that you examined?

A: I would say within the last twelve hours.

Q: OK And tell me what data you're relying upon in arriving at that conclusion.

A: The presence of spermatozoa, and the strength of the acid phosphatase test. That's all you have to go on. [Note: the wit-

ness had performed only a qualitative test for acid phosphatase.]

Q: The Coroner found 219 mIU of acid phosphatase in the victim's vagina. What would be the significance of that number to you?

A: I'm afraid it doesn't mean anything to me.

Q: In the rectum there were 9 mIU of acid phosphatase. What significance does that have to you?

A: Drainage.

Q: Drainage?

A: Uh-huh. If anything, that's the only thing it could be. It's 9. They found some.

Without an extended discussion at this point as to how to determine an acceptable minimum level of competence, this writer will assume that there would be a general agreement among the membership of CAC that the above testimony would fall below such level. In reviewing the Code of Ethics, it appears that the overriding consideration for its existence is to try to present to the court the most accurate and impartial interpretation of the evidence possible. A second purpose appears to be to establish a difference between the ethical criminalists and unethical criminalists; i.e., membership brings with it a *prima facie* showing of quality. This might be considered as a sort of ego satisfaction by belonging to an association with high standards.

If this writer is correct in his interpretation of the purposes of the Code of Ethics, it would appear that concern should be given to competency in achieving both purposes. Most witnesses (particularly those of marginal competence) will use their membership in professional organizations as a foundation for their qualifications. If all members of the organization are to be "painted with the same brush," do they not have a legitimate interest in controlling the quality of work from the membership?

The only section of the C.A.C. Code of Ethics which appears to relate directly to this issue is Section H of Article II:

Scientific method demands that the individual be aware of his own limitations and refuse to extend himself beyond them. It is both proper and advisable that the scientific worker seek knowledge in new fields; he will not, however, be hasty to apply such knowledge before he has had adequate training and experience.

What, however, is the ethical obligation of the individual if he does not have enough awareness of the field to be able to recognize his own limitations? How is the criminalist to know when he has had "adequate" training and experience? Perhaps there is some value in con-

sidering the ethical standards of the legal profession (Rule 3-110 of Rules of Professional Conduct):

(A) A member shall not intentionally, or with reckless disregard, or repeatedly fail to perform legal services competently.

(B) To perform legal services competently means diligently to apply the learning and skill necessary to perform the member's duties arising from employment or representation. If the member does not have sufficient learning and skills when the employment or representation is undertaken, or during the course of the employment or representation, the member may nonetheless perform such duties competently by associating or, where appropriate, professionally consulting another member reasonably believed to be competent, or by acquiring sufficient learning and skill before performance is required, if the member has sufficient time, resources, and ability to do so.

(C) As used in this rule, the term "ability" means a quality or state of having sufficient learning and skill and being mentally, emotionally, and physically able to perform legal services.

Note that under this rule, incompetence alone is not an ethical matter; it is a violation of ethics only when the member "intentionally, or with reckless disregard, or repeatedly" fails to perform competently.

In attempting to apply either the legal standard or the C.A.C. Ethics section, we are faced with issue of deciding whether the individual in question has competence in the particular area. In fact, is the C.A.C. standard of "adequate training and experience" sufficient? Two criminalists may have had the same training and experience, but one may have understood the significance while the other did not. Thus, is it sufficient for the criminalist to render opinions only because he has had a minimum number of hours of training and months of experience?

At what point should we determine that the individual lacks sufficient ability to render opinions in a particular area? Or is this a decision only to be made by the individual's supervisor and not an area for the association. At what point do we decide that an individual knows—or should know—of his/her own deficiencies? Should the person giving testimony above be aware of such deficiencies?

The series concludes in the next issue.



New Feature

"Black Talon" Ammunition

Jim Roberts
Firearms and Toolmark Examiner, Ventura Co. Sheriff's Lab

Q: *Just out of curiosity, I have a few questions about Black Talon ammunition, sometimes called Ranger Winchester.*

A: Winchester changed the name from Black Talon to Ranger SXT for marketing reasons after it was removed from sale to the general public. SXT is short for Supreme eXpansion Technology (some say Talon) and there is a non-Talon SXT that does not have the Ranger name attached nor the Talon's but shares many other characteristics.

Q: *Which states have made use of this ammo illegal?*

A: I do not know of a state that has made it illegal but there may be some. Winchester withdrew it from the market to the general public and made it a "Law Enforcement Only" product when the press brouhaha started. It therefore is unavailable for general sale in all states. By the way, don't believe the claims made in the press. Many were without foundation like the "buzz-saw" comments.

Q: *If not illegal, are any law enforcement agencies issuing it?*

A: Our agency issues it and I believe that L.A. Co. Sheriff's are changing to it this year. I think there are a fairly large number of agencies now using it. It has excellent wound ballistic characteristics. There are others that are about as good but maybe none better.

Q: *What kind of experience do any of our list members (crime scene folks, pathologist-types, etc.) have with this ammo not "blooming" upon contact, that is to say, how often will the round simply pass through a gel or body, without causing the much touted damage?*

A: As with any controlled expansion bullet it works best when not adversely effected by outside forces. If, for example, it strikes bone on entry and tumbles, the HP (hollow point) is not forward. If the HP is not forward the hydraulic action that causes expansion will not occur. Any HP bullet can be plugged by material under some circumstances and this can have adverse effects.

Controlled Expansion bullet designs are designed to open when used at certain velocities, this is referred to as the design velocity window. If a bullet is below that velocity upon target entry do not expect good expansion. Look to the FBI bullet studies as a starting point to see where some bullets fail and others continue to work. Dahlstrom & Powley provide some quite useful information in their article in the *Journal of the International Wound Ballistics Association*, Vol.2 No.3. There are some other possibly related materials in other IWBA Journals and good explanations of the forces

involved in expansion in Duncan MacPherson's, *Bullet Penetration, Modeling the Dynamics and the Incapacitation Resulting from Wound Trauma*, if you want to go into the details of how bullets work. CCI/Speer put out a poster that shows FBI protocol testing of several premium bullets (including Win BT) against their Gold Dot bullet. They also have sales reps putting on live fire demonstrations around the county, you can go to one and take some Talon to have them shoot. They have put on the demo for the Southern Calif. Firearms Study group in the past and you can learn a good deal about wound ballistics by attending one. See for yourself (in rather idealized conditions of course). Things are seldom ideal during a shooting incident, so don't expect perfect performance from bullets, people, or much of anything else. If the bullet doesn't act as designed, look for a reason, there is usually one with a bullet of this quality if you can just recognize it.

Answers published in "Q&A" are those of the author and do not necessarily reflect those of the author's employer.

The subject is criminalistics.

Any Questions?

Q&A is a new periodic feature of *The CACNews* offering questions and answers pertaining to every aspect of criminalistics. Maybe you work in the DNA section but always wanted to know what happens to the heroin molecule as it enters the bloodstream. Now you can ask your questions in complete anonymity! Send them in care of Raymond Davis, Editor. We will seek out experts in the field, pose your questions and print the answers here.

Regional Director North

On March 14, 1997 Co-chairpersons **Jennifer Mihalovich** and **Tom Winder** hosted a DNA Study Group meeting at the Oakland Police Department. The guest speaker, **Raymond Davis**, discussed effective courtroom presentation of DNA evidence to the judge and jury. There were approximately 20 individuals in attendance from various Northern California laboratories.

The DNA Study Group had another meeting on May 6, 1997 at the California Department of Justice DNA Laboratory. The study group topic was entitled "Tips, Techniques, Blunders and Pet Peeves." Guest speakers included **Keith Inman** on courtroom testimony, **Terry Spear**, and **Lisa Calandro** on setting up a PCR laboratory.

The second annual Northern California Arson Seminar met on May 5, 1997 in Martinez, California. This year's meeting was co-hosted by **Steve Ojena** of Contra Costa County Sheriff's Crime Laboratory and **Bradley Johnson** of Sacramento County Laboratory of Forensic Services. There were approximately twenty-five criminalists and chemists in attendance. Several peer presentations were given concerning current arson issues, interesting casework or research. A tour of the Shell Oil Refinery in Martinez completed the day long seminar.

The first annual Northern California Explosives Seminar is scheduled to be hosted at the Sacramento County Laboratory of Forensic Services on October 14, 1997. A tentative schedule of events will include peer presentations, a panel led round table discussion, and a range exercise in conjunction with Sacramento County's EOD team. For more information please contact Bradley Johnson at 916-732-3840.

—*Pamela Sartori*

Regional Director South

Los Angeles County Sheriff's Crime lab hosted a dinner meeting with associated study groups. Dinner meeting speakers were **Heidi Robbins**, **Liz Devine** and **Steve Schliebe** who spoke about evidence presented in the Linda Sobek murder case.

The Huntington Beach Police Department Scientific Investigations Unit hosted a dinner meeting. The guest speaker was Ken Goddard, Director of the National Fish and Wildlife Forensics Laboratory. The topic of discussion was "Forensics in wildlife poaching cases with an emphasis on wildlife crime scenes."

There were several study group meetings: The Trace Study Group met to discuss CTS proficiencies, reference collection of ignitable liquids and discussion of GC/MS arson analysis. The Biology Study Group met to review January TWGDAM meeting, review of AAFS papers and discussion of case work solicited from attendees. The Drug Study Group met to discuss analyst training programs and interesting case work. The Blood Alcohol Study Group was invited to tour the research facility of Dr. Marcelline Burns followed by a two hour class on the topic of field sobriety testing.

—*David Stockwell*



Welcome New Members—

Join in Our Celebration of You!

Once upon a time, back in October of 1995, the CAC initiated a program for our new members. I spoke about it in the CAC business meeting, and in subsequent President letters. But, I thought, thought I, "Why not take advantage of our CAC Editorial Secretary's excellent CAC newsletter to bring the entire membership up to date?"

The CAC now has two new and rewarding events at each semiannual meeting. They are a permanent and integral part of every program! These are the **New Member Orientation** and the **New Member Reception**. The primary goals of both activities are to welcome and educate new members. Each activity is quite distinctive. Let me explain.

The purpose of the ORIENTATION is to introduce new members to the current Board of Directors and Committee chairpersons. It gives us an opportunity to let these energetic new individuals know what our duties are and explain what this Association is all about. I often hear from even our long term members that they don't know what a particular committee does for the Association and some don't completely understand duties of each of the Board of Directors. After all, how many board meetings have YOU attended since you joined CAC?

We encourage all new members to attend an Orientation at some point in time prior to requesting elevation to full member. Watch for the date and time in each semiannual meeting schedule of events.

The RECEPTION has a different purpose altogether! This is the Board of Directors opportunity to welcome our new members to the association and let them know how much we appreciate them. This is a social event and is hosted by the President. The President invites and encourages all committee chairpersons to attend as well. The Reception is held before the banquet at each semiannual meeting. If a new member can't make the Orientation, by all means come to the Reception!

All new members for the prior year are invited to both events to ensure the opportunity to participate. If a new member misses out on the two semiannual meetings after becoming a member, they should feel free to come to the next one. New members are invited to these activities for 2-3 meetings after joining.

And Committee Chairs—you know who you are! Once the President has invited you to the Orientation and Reception, please come! If for any reason you cannot participate send a member of your committee as a representative.

I encourage new members to attend the semiannual meetings. If you know that you will be brought into the CAC at a particular meeting, come to the official business meeting of the Association which is almost always on Friday afternoon. Join us at the Reception and come to the banquet that evening. Let the membership have the opportunity to welcome you!

What is the benefit of all this? Investment in the future of the CAC and of the profession of criminalistics. Offering a warm reception to our new members and encouraging them to actively participate in this association is beneficial to them and to the continuation of an exceptional organization. Such an investment can only bring a high return. We've got nothing to lose and everything to gain.

New members, WELCOME...and please join in our celebration of you!

—*Carol Hunter*

The CAC Board of Directors approved a plan to adjust the dues cycle so it will correspond more closely to both Journal cycles. Therefore, the 1998 dues cycle will begin in September 1997. Dues will be due on October 14, 1997. A second and final notice will be mailed after that date. A twenty dollar (\$20.00) late fee will apply to any dues received after December 15, 1997. Membership, for unpaid dues, will be dropped at the Board of Directors meeting held in January, 1998.

CAC Treasurer's Report—Michael J. Parigian
Account Balances July 1, 1996 to March 31, 1997

Cash Balance July 1, 1996		\$36,951.04	
INCOME			
Interest	\$474.52		
Meetings	\$211.08		
Seminars	\$626.45		
Membership dues	\$29,015.00		
Membership applications	\$3,760.00		
Certification (ABC)	\$0.00		
Advertising	\$200.00		
Endowment income	\$0.00		
Other	\$93.50		
Total income	\$34,380.55	\$34,380.55	
EXPENSES			
Travel	\$6,825.54		
Printing	\$10,162.86		
Postage	\$1,521.04		
Supplies	\$793.23		
Bank fees	\$420.55		
Accounting service fees	\$682.50		
Awards	\$984.55		
Meetings	\$300.85		
Seminars	\$5,632.31		
ABC support	\$400.00		
Memorial donations	\$0.00		
Endowment Exp., admin	\$475.27		
Journal	\$21,208.77		
Phone	\$129.09		
Refunds	\$60.00		
New member	\$140.31		
Consultations	\$2,451.50		
Other	\$229.83		
Total Expenses	\$52,418.20	\$ (52,418.20)	
Cash Balance March 31, 1997		\$ 18,913.39	
Cash on hand 9-30-96			
Savings	\$14,461.61		
Checking	2,451.78		
Spring 97 Seminar	1,000.00		
Spring 98 Seminar	1,000.00		
	18,913.39		

Inside Information

New Hires: Fenella Boshoff, Criminalist, Ventura County Toxicology Unit; Stephanie Lowe, Criminalist, Los Angeles Police Department Narcotics Unit; Henry Tuazon, Criminalist, Los Angeles Police Department Narcotics Unit; Nick Sanchez, Criminalist Los Angeles Police Department Serology Unit; Nand Hart-Nibbrig, Criminalist, Los Angeles Police Department Toxicology Unit, Zach Gaskin, Criminalist, San Diego Police Department Narcotics Unit; Jorge Pena, Criminalist, San Diego Sheriff Blood Alcohol Unit; Melissa Chavis, Lab Tech, Riverside DOJ Narcotics Unit; Preston Poulter, Lab Tech, Riverside DOJ Narcotics Unit; Paul Mirra, Criminalist, San Bernardino Co Narcotics Unit; James Baughn, Criminalist, San Bernardino Co; Kalpesh Mistry, Criminalist, San Bernardino Co; Patricia Van Rueden, Criminalist, San Mateo Co Toxicology Unit; Elliot Kollman, Supervising Criminalist, Santa Clara Co DA Trace Unit; Penny Tanner, Assistant Criminalist, Oakland Police Department

Retirements: John Houde, Ventura County; William Blondet, San Bernardino

Promotions: Betty Kelepecz, Los Angeles Police Department, from Captain to Commander; Mary Trudell, Oakland Police Department, Asst Crim to Crim II; Jennifer Hannaford, Oakland Police Department, Asst Crim to Crim II; Tom Winder, Oakland Police Department, Crim II to Criminalist III

Transfers: Captain Betty Kelepecz, from patrol to Commanding Officer of Los Angeles Police Department; Commander Betty Kelepecz from Commanding Officer of Los Angeles Police Department SID to Community Policing

Miscellany: Congratulations to Don Jones and Dan Gregonis of San Bernardino County Sheriff's on their Master's Degrees in Biology. Calif. Dept. of Justice Riverside is going to go from their present quarters to a new facility (Still not started) by September of 1998. If this happens, it is obviously not a government job.

Remember, call me with info you want included in the next Insiders Report.

—Greg Matheson

— Passages: —

Alfred "Al" Biasotti 1926-1997

Alfred "Al" Biasotti passed away on June 24, 1997 at the age of 71. Al joined the California Department of Justice in 1972 and retired in 1990 as Deputy Bureau Chief of Forensic Services. He began his career with the Wisconsin State Crime Lab after obtaining an undergraduate degree from the University of California at Berkeley. He received his Master's degree in 1955. Al also worked at the Pittsburgh, PA, and Santa Clara County (Calif) Crime Lab before joining the DOJ. Al just couldn't seem to retire and continued to teach at the California Criminalistics Institute after his retirement. Al made significant contributions to the field of firearms identification and criminalistics. He will be missed.

Leftovers

Who Needs Fiction?

The following story reveals the legal complications of a bizarre death. On March 23, 1994, the medical examiner viewed the body of Ronald Opus and concluded that he died from a shotgun wound to the head. The decedent had jumped from the top of a ten story building intending to commit suicide. He had left a note indicating his despondency. As he fell past the ninth floor his life was interrupted by a shotgun blast through a window, which killed him instantly. Neither the shooter nor the decedent was aware that a safety net had been erected at the eighth floor level to protect some window washers and that Opus would not have been able to complete his suicide anyway because of this.

Ordinarily, a person who sets out to commit suicide ultimately succeeds, even though the mechanism might not be what he intended. That Opus was shot on the way to certain death nine stories below probable would not have changed his mode of death from suicide to homicide. But the fact that his suicidal intent would not have been successful caused the medical examiner to feel that he had a homicide on his hands. The room on the ninth floor whence the shotgun blast emanated was occupied by an elderly man and his wife. They were arguing and he was threatening her with the shotgun. He was so upset, that when he pulled the trigger, he completely missed his wife and pellets went through the window striking Opus. When one intends to kill subject A but kills subject B in the attempt, one is guilty of the murder of subject B.

When confronted with this charge, the old man and his wife were both adamant that neither knew that the shotgun was loaded. The old man said it was his long standing habit to threaten his wife with the unloaded shotgun. He had no intention to murder her, therefore the killing of Opus appeared to be an accident. That is, the shotgun had been accidentally loaded.

The continuing investigation turned up a witness who saw the old couple's son loading the shotgun approximately six weeks prior to the fatal incident. It transpired that the old lady had cut off her son's financial support and the son, knowing the propensity of his father to use the shotgun threateningly, loaded the gun with the expectation that his father would shoot his mother. The case now becomes one of murder on the part of the son for

the death of Ronald Opus.

There was an exquisite twist. Further investigation revealed that the son, one Ronald Opus, had become increasingly despondent over the failure of his attempt to engineer his mother's murder. This led him to jump off the ten story building on March 23, only to be killed by a shotgun blast through a ninth story window. The medical examiner closed the case as a suicide.

This story was presented by Don Harper Mills at the 1994 annual awards dinner given by the AAFS.



Having a Ball

(above) A few scenes from the "Black and White Ball," theme of the Spring Seminar in Sacramento.

Freebies

(Below) Free samples of gasoline additives shared at the recent Southern Section Trace Study Group.



Bolt Cutter Tool Marks

Frank H. Cassidy

ABSTRACT

Tool marks from a submitted bolt cutter were different from the typical tool mark obtained by cutting exemplar lead. Analysis showed that the cause was due to the type material being cut. A “softer” type of hard material than the bolt cutter—and the submitted evidence—was utilized for tool mark replication. Impressed tool marks from the blade were readily comparable to those on the evidence, which was hardened fence wire and a padlock shackle. It is recommended that when there is the possibility that damage to the tool might occur when trying to reproduce the cut surface of the unknown with the same type material as the unknown, that a type of “soft” hard material such as heat-treated aluminum alloy be used for replication.

KEY WORDS: bolt cutter; class characteristics; heat-treated aluminum alloy; impressed tool marks; lead; tool marks

Reference 1 shows tool marks from bolt cutters are depicted as two V-cuts with a slight protrusion at the separated intersection. However, this is because the test cuts to evaluate the reproducibility of the tool marks from a tool are normally performed by cutting lead specimens, Reference 2. Lead is used to minimize damage to the tool which could occur if a material being tested is close to the same hardness as the unknown. The use of lead, however, may not always be the best material to use in all tool mark replication.

Recently, pieces of range fences with tool marks were submitted to our laboratory, together with a dual function fence pliers-staple puller suspected as being the tool that did the cutting. It was permissible to use surplus wire on the evidence for control tests.

Exemplar specimens from the surplus wire were going to be cut with diagonal cutters, (side cutters), but the wire was too tough. A laboratory bolt cutter did perform the job successfully.

The initial exemplar cuts of the wire by the submitted fence pliers for verification of reproducibility of the cuts resulted in a different type cut than found on the unknowns. Figure 1 compares the unknown cut with a cut from the fence pliers. None of the photographs of Reference 1 were the same as the unknown tool mark.

About this time, it was noted that the profile of the ends of the pieces of exemplar wire cut with the laboratory's bolt cutter had the same characteristic “plateau” as found on the submitted cut wire. Thus, it was believed that a bolt cutter was responsible for the unknown cuts. The investigating agency was contacted and informed that the fence was not cut with the

fence pliers but probably was cut with a bolt cutter. They confirmed they had a bolt cutter seized from the suspect. It was submitted to the laboratory together with a “Master” padlock whose shackle had been cut.

Examination of Figure 1 shows that the top portion of the unknown cut has a small diagonal displacement and then a flat area which is a compression of the wire material. A very hard material does not readily shear the way that a soft material like lead does. Consequently, the material will first compress when pressure is applied by the harder metal of the tool. When the ultimate compressive strength is reached, the specimen shears. Part of the cross-section—i.e., under the flattened section—will have an angular surface characteristic of a brittle fracture. There will be some striated tool marks on the diagonal displacement associated with the flattened, compressed part. The flattened portion has impressed tool marks. Another consequence of this type of tool mark is that the fractured portion may have very poor transfer of tool marks.

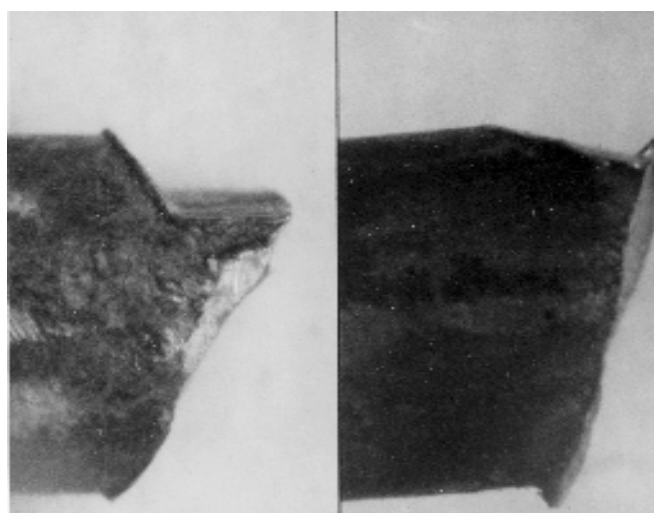


Figure 1. (above) Profile of the cut from the unknown tool compared to that of the submitted tool.

Figure 2. (below) Flat surface of a bolt cutter that can leave a “plateau” on the surface of the cut of hard materials.



Frank Cassidy is a retired annuitant with the California Department of Justice Laboratory in Santa Barbara.

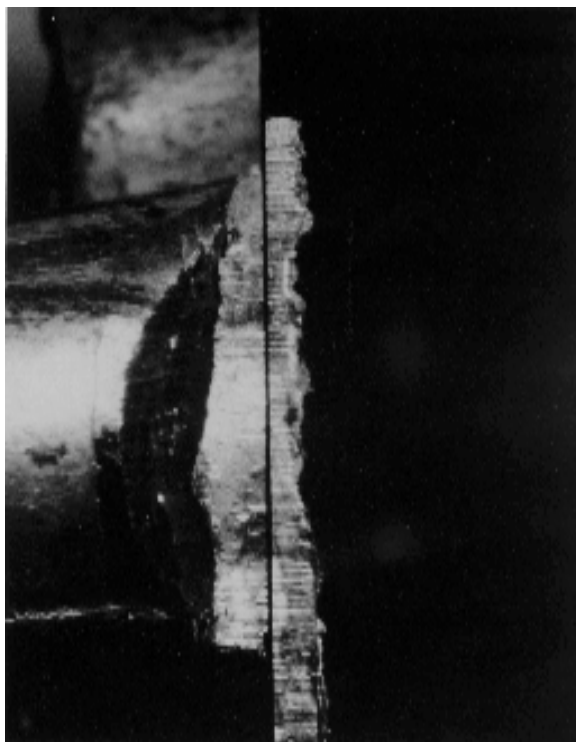


Figure 3. Comparison of impressed stria on the shackle of a lock and hardened aluminum cut by the submitted bolt cutter. The surfaces are from the "plateau" of the tool mark.

Microscopic examination of all the submitted wire specimens showed that there were good impressed tool marks on the compressed surfaces of both segments of the cut—there will be two compressed surfaces, one from each of the flat surfaces of the two blades. Bolt cutters have a flat surface between the two cutting faces. This flat surface can be seen in Fig. 2. As stated above, there also were tool marks on the diagonal area above the flat, impressed tool marks but they were striated.

If the material being cut is very hard, it may permanently change the edge between the cutting face and the flat face that cause the diagonal striated tool marks—with the possibility that they may be difficult to match if more than one cut is made in hardened material. However, the impressed surfaces should be a fairly reproducible tool mark.

A good example of the impressed tool mark on a very hard surface is that of a Master padlock's cut shackle that was submitted with the evidence of this case. The matching of the impressed tool mark on the shackle and an impression from the bolt cutter that was subsequently submitted is shown in Figure 3. The fence

wire cuts could also be matched as having been cut by the same bolt cutter but none of these matching photomicrographs is shown.

Is it desirable to use a submitted tool to cut the same type material that has been submitted as evidence? One probably would be very reticent to do this for fear the tool could be further damaged and the exemplars would not match the evidence—i.e., if that tool was responsible.

A viable solution to this dilemma was incorporated as part of the testing procedure for this case. Hardened aluminum sheet—probably 6061-T6 alloy—was used to make the impressions. This material is much softer than the hardened jaws of the bolt cutter. It is tough enough, however, to approximate the cuts that are done by a bolt cutter on hardened material, e.g., the

shackles of padlocks and the fence material. The impression from the control cut of Fig. 3 was done on a piece of hardened aluminum and was positioned in the jaws of the bolt cutter at a slight depression in its jaws that proved to have been caused by cutting the submitted padlock shackle. (If the bolt cutter had been used to cut other portions of that shackle, it is highly probable there would have been more than one bulge in the jaws!)

CONCLUSIONS AND RECOMMENDATIONS

1. Class characteristics of tool cuts can be physically different depending on the hardness of the material being cut. This is demonstrated with bolt cutter cuts using lead and with hardened metal such as steel or heat-treated aluminum. One should probably use a material harder than lead to make control cuts if the submitted tool mark is on a hard material, but the material should not be so hard as to damage the tool.

2. A hardened material such as some of the heat-treated aluminum alloy should be considered for making test cuts with tools that have been submitted with

hard, severed specimens such as padlock shackles.

REFERENCES

1. Cochrane, Cpl. D.W., "Class Characteristics of Cutting Tools and Surface Designation", *AFTE Journal*, Vol. 17, No. 3, 1985, pp. 73-83.
2. Butcher, Shirley J. & Pugh, P.D., "A Study of Marks Made by Bolt Cutters", *Journal of Forensic Science Society*, (1975), Vol. 15, pp. 115-126.

BIBLIOGRAPHY

- Gibson, Wendy M., "AFTE Toolmark Article Index", *AFTE Journal*, Vol. 28, No. 4, (Oct. 1996), pp. 266-286
- Hall, James M., "Consecutive Cuts by Bolt Cutters and Their Effect on Identifications", *AFTE Journal*, Vol. 24, No. 3, 1992, pp. 260-272
- Hornsby, Billy, "MCC Bolt Cutters", *AFTE Journal*, Vol. 21, No. 3, 1989, p. 508
- Paholke, Arthur R., "The Identification Class Characteristics of Tool Marks (The Evidence Receipt/Activity Report)", *AFTE Journal*, Vol. 10, No. 2, June 1978, pp. 59-62

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The CACNews

YOU WILL BE KNOWN BY THE SWEAT OF YOUR BROW (or Who is the Cat in the Hat?)

Donald T. Jones, Daniel J. Gregonis, David C. Stockwell, and Caroline M. Kim, San Bernardino County Sheriffs Department.

Abstract

During a blind study the sweatbands from seven baseball caps were extracted in an attempt to match them to the correct wearer. DNA was isolated using the organic extraction method followed by Centricon concentration. The quantity of recovered human DNA was determined by slot blot analysis. Of the seven sweatbands, five yielded human DNA, of which four samples were able to be amplified though the polymerase chain reaction (PCR) method using the Perkin-Elmer Amplitype™ PM+DQAI typing kit. The amplification product gel showed indications of a degradation in the samples. This was reflected in the partial typing results for two of the samples. The results of one sample indicated a mixture by producing a strong primary profile and several weaker alleles. Nonetheless, the four baseball caps which yielded DNA results were each matched with the correct wearer in a limited reference population of ten individuals.



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Davis, cont'd

Last and least. Since I decided to re-up for 2 more years as the Editorial Secretary, I thought it only prudent to get another photo taken. After all, the other one made me look older than I really am: 39! So I set out to look for another, more befitting photo as your Editor. A friend of mine took this photo of me while attending a roaring '20's party. All of us got dressed up in period outfits appropriate for that era. I went as a submachine gun toting gangster, wearing an ill fitting zoot suit with white suspenders and a shiny black shirt. Actually, the photo was under exposed and not suitable for reproduction in the newsletter. I gave it to **John Houde**, our art director who put me into his computer and out popped the mug you see before you. I want to acknowledge John providing attendees at the Sacramento seminar with 45 copies of the Office of the Inspector General's Report On the FBI Laboratory. Just another service provided by John's new venture, Calico Press!

Raymond

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Notice to Contributors

We publish material of interest to our readers and are pleased to receive manuscripts from potential authors. Meetings and course announcements, employment opportunities, etc. are also solicited. Advertisements are also accepted, although a fee is charged for their inclusion in *The CAC News*. Please contact the Advertising Editor for further information. Because of the computerized typesetting employed in *The CAC News*, submissions should be made in the form of MS-DOS compatible files on 3.5 inch floppy disks or by e-mail (jhoude@compuserve.com). An accompanying hardcopy of the file should be submitted along with the disk to illustrate the author's preference for special emphasis. Graphics, sketches, photographs, etc. may also be placed into articles. Please contact the Editorial Secretary for details. The deadlines for submissions are: December 15, March 15, June 15 and September 15. **Nonmember subscriptions** are available for \$24 domestic \$30US foreign—contact the Editor for more information.

A Final Word

Hair

We give thanks for the mystery of hair
too little here and too much there
censored and shaved, controlled and suppressed;
unwelcome guest in soups and sandwiches.
Difficult growth always needs attention.
Gentle and comforting;
complex and wild;
reminding us softly
that we might be animals.
Growing and growing
'til the day we die.
And the day after as well
so they say!
In all of its places
and in all of its ways
we give thanks for the blessing of hair.
Amen

Michael Leunig



Above: a couple more at the Ball...

"Hair", poem submitted by Frank Cassidy. Frank says when he came across this synopsis in *Catholic Digest* he couldn't help but think of his fellow hair examiners, especially John DeHaan, "who taught me lots about hair."

Tips for Prospective Authors

1. Avoid alliteration. Always.
2. Prepositions are not words to end sentences with.
3. Avoid cliches like the plague. (They're old hat.)
4. Employ the vernacular.
5. Eschew ampersands & abbreviations, etc.
6. Parenthetical remarks (however relevant) are unnecessary.
7. It is wrong to ever split an infinitive.
8. Contractions aren't necessary.
9. Foreign words and phrases are not apropos.
10. One should never generalize.
11. Eliminate quotations. As Ralph Waldo Emerson once said:
"I hate quotations. Tell me what you know."
12. Comparisons are as bad as cliches.
13. Don't be redundant; don't use more words than necessary; it's highly superfluous.
14. Profanity sucks.
15. Be more or less specific.
16. Understatement is always best.
17. Exaggeration is a billion times worse than understatement.
18. One-word sentences? Eliminate.
19. Analogies in writing are like feathers on a snake.
20. The passive voice is to be avoided.
21. Go around the barn at high noon to avoid colloquialisms.
22. Even if a mixed metaphor sings, it should be derailed.

Author!

Clockwise from upper left: Cyril Wecht, "Cause of Death"; Barry Fisher, "Techniques of Crime Scene Investigation"; Henry Lee, "Crime Scene Investigation"; Richard Saferstein, "Criminalistics, An Introduction to Forensic Science."; James Starrs, Review of Scientific Evidence in Civil and Criminal Cases" (4th ed.); Robert Gaensslen, "Introduction to Criminalistics."

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Is “Something wrong?”

This October, You be the Judge.

Henry C. Lee. Barry Scheck. Woody Clarke. Greg Matheson. Ed Blake. Peter DeForest. What do these folks have in common besides being a few of the key players in the “Trial of the Century?” They will be participating in an interactive panel discussion at the upcoming 90th semiannual CAC seminar hosted by the Orange County Sheriff’s Forensic Science Services.

The focus of the program is crime scene investigations. Come and peek behind the yellow tape in the O.J. Simpson case, the Linda Sobek case, the Denise Huber case (the body in the freezer), Heaven’s Gate and many more! The tentative program includes: Wed, Oct 8: **DNA User’s Group; Bullet Impact Workshop** (Luke Haag); **Gas Chromatography Troubleshooting Workshop** (Dean Rood). Thu. Oct 9: **Founder’s Lecture** (Peter DeForest); **Fire Scenes as Crime Scenes** (John DeHaan); **Bombing Investigations** (Charles Stumph); **CAC Business Meeting**. Fri. Oct 10: **Interactive panel discussion on the O.J. Simpson case:** Woody Clarke, Ed Blake, Peter DeForest, Henry Lee, Greg Matheson, Barry Scheck. **Crime Scene Reconstruction** (Henry Lee); **ME at the Death Scene** (B. Blackbourne); **Behavioral Reconstruction** (Park Dietz); Dinner / Casino Night. Sat, Oct 11: **Burial Sites** (Judy Suchey); ABC Certification Exams.

Hotel reservation and registration information will be available soon. CAC member papers are scheduled for Thursday afternoon and Saturday morning. If you plan to present a paper, the deadline to submit the abstract is August 22.

Contact seminar cochairs **Liz Thompson** or **Kenny Wong** at (714) 834-4510 with any questions.

fall '97 Beyond the Yellow Tape:
Science at the scene



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