California Association of Criminalists

NEWSLETTER

DECEMBER 1983

CONTENTS

This mailing includes the following items:

1. Board Meeting Minutes, July 28, 1983. (Approved).
2. CAC Salary Survey
3. Federal and Private Laboratory Roster

UPCOMING MEETINGS

American Academy of Forensic Sciences Annual Meeting
February 21-25, 1984. Anaheim, CA. Disneyland Hotel.

Southwestern Association of Forensic Scientists
May 3, 4 & 5, 1984. Scottsdale, AZ. Doubletree Inn (at Scottsdale Mall). Hosted by the Arizona Department of Public Safety Phoenix Crime Laboratory. Blood Spatter and Head Lamp workshops will be included, as well as a Capillary Column Gas Chromatography School. Contact: Todd Griffith or Susan Narveson, Arizona Department of Public Safety Crime Lab, P.O. Box 6638, Phoenix, AZ 85995. (602) 262-8394.

CALIFORNIA ASSOCIATION OF CRIMINALISTS - SPRING SEMINAR 1984
May 9, 10, 11 & 12, 1984. Monterey, CA. Casa Munras Hotel (on the scenic Monterey Peninsula). Hosted by the California Department of Justice, Salinas Laboratory. Contact: Stephen Cooper, Seminar Chairman, California Dept. of Justice, 745 Airport Blvd., Salinas, CA 93901. (408) 443-3188.

International Association of Forensic Sciences
September 18-25, 1984. Oxford, England. Contact: The Secretariat, 10th IAFS Meeting, Clarke House, 18 Mount Parade, Harrogate, HG1 1BX, England.

CALIFORNIA ASSOCIATION OF CRIMINALISTS - FALL SEMINAR 1984
To be hosted by the San Diego Police Department Crime Laboratory.

CALIFORNIA ASSOCIATION OF CRIMINALISTS - SPRING SEMINAR 1985
To be hosted jointly by the Oakland Police Department Crime Lab and the University of California, Berkeley.

California Association of Criminalists

Sixty - Third Semi-Annual Seminar

May 9 - 12, 1984.

Hosted by the California Department of Justice, Salinas

Headquarters Hotel and Meetings at the

CASA MUNRAS HOTEL
MONTEREY
(on the scenic Monterey Peninsula)

Inquiries should be addressed to:

Stephen Cooper
Seminar Chairman
California Dept. of Justice
745 Airport Blvd.
SALINAS, CA 93901.
(408) 443-3188

CALL FOR NOMINATIONS - CAC OFFICERS

The nominating committee solicits your nominations for the following four offices:

PRESIDENT - ELECT
MEMBERSHIP SECRETARY
RECORDING SECRETARY
REGIONAL DIRECTOR - NORTH

Elections for these offices will be held at the Spring Seminar in Monterey.

PRESIDENT - ELECT is a three year term through President and Immediate Past President; Responsible for presiding over meetings of the Board and Corporation and official correspondence of the Association; Previous Board experience highly desirable; Access to secretarial assistance highly desirable.

MEMBERSHIP SECRETARY is a two year term; Responsible for maintaining membership records of the Association and compiling/reviewing individual membership applications and records; Previous Board experience desirable; Acquaintance with a large section of the membership highly desirable; Access to secretarial assistance helpful.

RECORDING SECRETARY is a two year term; Responsible for documenting all business and Board meetings for the Corporation; Previous Board experience desirable; Attendance at all Board and business meetings mandatory; Access to secretarial services necessary; Ability to take notes and write clearly necessary.

REGIONAL DIRECTOR - NORTH is a two year term; Responsible for co-ordinating, arranging and reporting activities of the Association in Northern California; Acquaintance with a large section of northern membership necessary; Recent participation in hosting/arranging regional meetings, study groups, seminars, etc. highly desirable.

Names of interested persons will be compiled and revieved by the committee. The entire committee will then decide the nominees for each position. Selected nominees will then be required to write a statement of position and interest with regards to the office involved. These statements will then be published in the March CAC Newsletter.

Contact one of the Committee members with your nominations:

Ed Rhodes (Chair)	(213) 974-4611
Marty Blake	(415) 273-3386
Frank Fitzpatrick	(714) 834-3050
Carol Harralson	(415) 372-2455

ANNOUNCEMENTS

Theresa Spear Receives Paul Kirk Award

The Awards Committee is pleased to announce Theresa Spear of the Alameda County Criminalistics Laboratory as the 1983 recipient of the Paul Kirk Award. Ms. Spear will receive a plaque from the Association, plus a $100 stipend provided by the American Academy of Forensic Sciences. Her name will also be anounced as our Association's recipient of the American Academy stipend at their meeting in February.

Availability of SWAFS Journal to Non-Members

It is now possible for non-SWAFS members to receive the Southwestern Association of Forensic Scientists Journal. A subscription to the Journal for $6.00 a year is now available. Interested individuals or organizations should make their checks payable to SWAFS Journal and remit to the Editors: Mr. R. Bridgeman & Mr. R. Jarzen, SWAFS, Arizona Department of Public Safety, Southern Regional Crime Laboratory, 6401 South Tucson Boulevard, Tucson, Arizona, 85706.

Short Paper Submission to the JFSS

Papers presented at CAC meetings are eligible for publication as Short Papers in the Journal of the Forensic Science Society. Papers should be two to four pages long, double spaced. The papers will not undergo a formal peer review, rather they are eligible for publication because of their presentation at a CAC meeting. Papers should be submitted to the Editorial Secretary for transmittal to the Journal.

CAC Speaker's Bureau

At the Fall Seminar a proposal was affirmed by the membership to create an informal "Speaker's Bureau" within the CAC. The group will consist of individuals volunteering to speak on such topics as laboratory services, technologies, and evidence handling. A number of members have already volunteered. If you are an experienced speaker and would like to have the opportunity to speak on behalf of your profession, your laboratory, or the Association, please write or call John DeHaan. Let him know the topics on which you would like to speak and the geographical area in which your services would be available. Names of groups potentially interested in speakers are also solicited.

Historical Committee Seeks Materials

Duayne Dillon, Historical Committee Chair, has announced that archival space will be made available to the CAC at the DOJ/BFS Administration offices in Sacramento. Available there will be microfilm camera capabilities and video-tape copying services. You are encouraged to share the notes, photos, and memorabilia that you have stuck away, forgotten, in drawers, boxes, and files, with all of us - those in the criminalistics profession now, and those to come in future years.

Hiram Evans is now cataloging the CAC business archives for microfilming, and there are great plans afoot to show off the best of our historical (histerical?) collection at the hospitality room the CAC is hosting at the Anaheim Academy meeting in February.

Your help is needed now. Contact Duayne Dillon, Bob Ogle, or Fred Tulleners with a list of the materials you have available. The CAC will make the necessary arrangements to duplicate the material and insure its safe return to you. Won't you help preserve this history before it's too late?

Fingernail and Toenail Reference Collection Offered

One of the most stable of the long-term products of the human body is the outgrowth of the epidermis in the form of fingernails and toenails. These have been occasionally used in criminal cases for the identification of a suspect or victim via a comparison of the growth ridges. But information on the stability of these features over a long time span is sketchy. One of our members has generously offered to provide a reference collection of finger and toenail cuttings collected regularly over a twelve year period. This time span also includes physical injury, frostbite, and nerve damage to the digits involved.

Anyone interested in conducting a valuable study on this form of identification, (this would be especially of interest to students or student interns looking for a research project), please contact:

A. Reed McLaughlin
579 Valley Road
Roseburg, OR 97470

Glass Examination Notes & Reports Wanted

The Southern Section of the Trace Evidence Study Group is seeking examples of glass examination notes and reports. All items may be submitted anonymously. These will be compiled and used in conjunction with the video-tape on glass examination prepared by the Group. Please send your Notes/Reports to:

Sandy Wiersema
Orange County Sheriff-Coroner
Forensic Science Services
550 N. Flower
P.O. Box 449
Santa Ana, CA 92702

ASSOCIATION ACTIVITIES

Northern Section Meeting

The San Francisco Police Department co-hosted a dinner meeting with the Trace Evidence Study Group on Friday, September 16, 1983 at the Cliff House. The guest speaker was H.R. Raaschou-Nielsen from the Scandinavian Paint and Printing Institute in Denmark. An outline of his presentation will appear in the March Newsletter.

Southern Section Meeting

Bill Loznycky was instrumental in organizing the meeting hosted by San Diego Police Department Crime Laboratory on Friday, August 19, 1983 at the Catemaran Hotel in San Diego. The speakers were James P. Stathes, Resident Agent ATF; Eugene Wolberg, Criminalist San Diego Police Department; Ensign Rick Grene, Navy Seal Team; and John J. Darenco, Special Agent ATF. The speakers gave an extremely interesting presentation on "Automatic and Silenced Weapons." There were numerous weapons present for "hands-on" examination.

STUDY GROUP MEETINGS

(The following Study Groups are currently active. For further information regarding one of these groups, or to be placed on the mailing list, contact the member listed.)

Trace Evidence Study Group - North (S. Shaffer or M. Blake)

The Group met in August. Steve Shaffer discussed the proceedings of the Hair Evidence Symposium (Quantico - June 83); he believes the best product to come of the symposium will be an atlas of photomicrographs illustrating various hair features (to be used possibly as a foundation for a statistical approach to hair examination). Also discussed was the design of new hair proficiency excercises. Twelve individuals agreed to mount 100 of their own head hairs, one hair per slide. The samples are to be coded to allow their use in a variety of excercises.

Trace Evidence Study Group - South (S. Wiersema or E. Rhodes)

The Trace Evidence Study Group met on August 19, 1983 at the Catamaran Restaurant in San Diego. The topic for discussion was "Glass." A hand-out was available summarizing basic manufacturing methods and the composition of glass frequently encountered in the crime lab. (A copy of the handout appears in this Newsletter.) Ed Rhodes showed two segments of a video tape which he had prepared for use in conjunction with the hand-out as a training aid. The first segment, filmed at the Los Angeles Sheriff's Department, demonstrated various methods for determining refractive index.

ASSOCIATION ACTIVITIES - (continued)

Trace Evidence Study Groups - Joint Meetings

The Trace Evidence Study Groups held a joint meeting at the Fall Seminar in Ontario. The completed video tape on glass examination was shown and discussed. Additional segments of the video were Screening and Evaluation of Glass Evidence and Methods of Density Measurement and Comparison of Glass Samples.

The Second Annual Trace Evidence Summit Meeting was held Nov. 10 through 13 at Yosemite. There were 18 attendees from 12 laboratories. Activities included a literature review by Steve Shaffer; discussion of Pete Barnett's computer-assisted trace evidence classification scheme; tips on video production by Ed Rhodes; a general discussion of techniques for sampling trace evidence from bodies; and a review of fiber dye extraction techniques.

Serology Study Group (Barbara Johnson, Dave Sugiyama, Carol Rhodes)

The Serology Study Group met at the CAC meeting in Ontario. Jim White demonstrated a technique for sub-typing EsD and PGM by isoelectric focusing, and the group discussed report wording and conclusions based on hypothetical case data.

Drug Study Group (Darrell Clardy)

The Drug Study Group met on August 19, 1983 at the Catemaran Restaurant in San Diego. The topic for discussion was effective expert testimony as it relates to drug analysis. The discussion was based on a recent publication, "Symposium: Effective Expert Testimony," J. Forensic Sci. 28(2):516-39, April 1983. The group also discussed the possibility of forming a committee to assist in writing legislative sections relating to drugs.

Computer Study Group (P. Barnett)

The first meeting of the Computer Study Group took place at Forensic Science Associates in Emeryville on Friday, July 29. The general discussion about the goals of this study group focused on the following:

1) Evaluation of software.
2) Attempts to secure discount purchase of software.
3) Study the use of computers for running laboratory equipment.
4) Provide information exchange.

The Group also met at the CAC meeting in Ontario. Pete Barnett spoke on data base management systems, contrasting "Personal Pearl" with "D-Base II." Jim Brackett related his experiences with computer-assisted blood-alcohol analysis.

COMMITTEE ASSIGNMENTS 1983-84

The following are the committees as presently constituted. Please contact the appropriate chair or member with your suggestions or ideas.

Awards	Karen Sheldon (chair) Carol Rhodes Bruce Fukayama	(415) 372-2455
By Laws	Peter Barnett (chair) V. Parker Bell Frank Fitzpatrick	(415) 653-3530
Ethics	Luke Haag (chair) Jan Bashinski Jerry Chisum	(602) 841-6153
Historical	Duayne Dillon (chair) Jim Brackett Jack Cadman Ed Miller Hiram Evans	(415) 228-9292
Nominating	Ed Rhodes (chair) Frank Fitzpatrick Marty Blake Carol Harralson	(213) 974-4611
Public Health	Kathryn Holmes (chair)	(415) 372-2962
Public Relations	Bob Ogle (chair) Gary Siglar	(916) 371-5440
Training & Resources ...	John Patty (chair) Benny Del Re Debbie Wakida	(415) 642-2455
Ad Hoc Breath Alcohol ..	Lowell Bradford (chair) Jim Brackett Larry Ragle Luke Haag Bill Casper Kathryn Holmes	(408) 371-8783

SUMMARY OF AWARDS GIVEN BY THE CAC

Certificate of Appreciation.

This certificate is designed to be presented to any non-member making a presentation to the CAC as a guest speaker at a local meeting, banquet speaker, or guest lecturer at a Seminar, and is awarded automatically by the Committee at the request of any member. It will be the responsibility of the Regional Director, Seminar Chairman, or other person arranging for the guest speaker to request the Committee to prepare this award.

The wording of the Certificate of Appreciation is also appropriate for the recognition of an outstanting paper or technical presentation by a member to the Association. A member may be nominated for this award by any other member or by the Awards Committee. If the certificate is used to honor the outstanding professional work of a member, it is awarded after unanimous vote of the Committee and approval by the Board.

Nomination Period - Open
Form of Award - Certificate
Some Past Recipients - speakers at study group meetings, regional dinner meetings, seminars.

Service Awards.

"Distinguished Service." 1) An award presented to outgoing officers vacating positions on the Board of Directors. Nominations are automatic (i.e. the award is prepared upon the Officer's leaving the Board). No approval by the Board is needed. 2) An award presented to members for service to the Association (e.g. committee chairmen or members). Nominations may be made by any member and no Board approval is necessary.

Nomination period - open, no deadlines (except that it is preferable to have awards to outgoing Board members prepared in time for presentation at the Spring Seminar). There is no limit to the number of times a member can be nominated or receive this award.
Form of Award - Certificate
Some past recipients: Dorothy Northey, for service on the nominating committee, previous members of the Board of Directors

(continued)

"Outstanding Service" This award is presented to a member in recognition of service to the Association. Examples of such contributions are: organizing or presenting special training or workshop sessions and accomplishing especially productive committee work. Nominations for this award may be made by any member, but it is the responsibility of the Committee to seek recommendations from the members and to originate nominations as appropriate. This Award requires unanimous vote of the three member Committee and approval of the Board.

Nomination period - open. There is no limit to the number of times a member can be nominated or receive this award.

Form of Award - Certificate and a letter of recognition from the President.

Some past recipients - John Murdock, for the revision of the Ethics Committee Procedures (1981)
Allan Gilmore, for his work on the Legislative Information Committee (1980)
Keith Inman, for conducting a Seminal/Vaginal Acid Phosphatase Electrophoresis Workshop (1979)

Paul Kirk Award An award presented annually to a member who is relatively new to the profession for contributions to the Association or to the profession. Currently, this award includes a cash stipend ($100.00) contributed by the American Academy and also provides that the recipient's name will be published in the American Academy Seminar program. Criteria for selection include: employment in the profession less than 5 years, contribution to the profession via research, presenting papers, organization and/or participation in workshops and study groups, training, development of kits or devices useful in the profession, etc. Nominations may be made by any member. The committee will screen the nominees qualifications and make a recommendation to the Board. Board approval of the recipient is necessary. If no nominees are provided by the membership, the committee will attempt to locate qualified members for consideration.

Nomination period - August 1 through 31 (in order to prepare for distribution of the Fall seminar). There is no limit to the number of times a member can be nominated or receive this award.

Form of Award - Plaque paid for by Association funds. Stipend as provided by the American Academy or other contribution.

Past recipients - Allan S. Garrett, Theresa Spear.

(continued)

Distinguished Member Award An award presented annually to a member for significant contributions to the Association. Such contributions might be long term service to the Association on the Board or Committee, numerous presentations at seminars, meetings, etc., extensive research and dissemination of the information to the forensic science community, organization of study groups or workshops etc. Nominations may be made by any member. The committee will screen the nominees qualifications and make a recommendation to the Board. Board approval of the recipient is necessary. If no nominees are provided by the membership, the committee will attempt to locate qualified members for consideration.

Nomination period - January 1 through 31 (in order to prepare for distribution at the spring seminar). There is no limit to the number of times a member can be nominated or receive this award.

Form of Award - Plaque paid for by Association funds.

Past recipients - George Sensabaugh for his work as Editorial Secretary, 1977 - 1983.

Roger Greene Memorial Award This award is the highest honor which can be conferred by the California Association of Criminalists. After formal, written nomination by a member, approval by the unanimous vote of the Awards Committe, and approval by the Board of Directors, the award is conferred by a vote of at least three-fourths of the voting members present at a regular business meeting. The award is given only to criminalists or specialists within the field of criminalistics in recognition of outstanding contributions to the field. Such contributions will include one or more of the following: Outstanding and unusual professional work on specific investigations, outstanding research and dissemination of the information to the forensic science community. A series of papers covering a wide range of subjects which show skillful work, unusual contributions to the education of criminalistics, high level direction or development of criminalistic laboratories, other unusual or significant contributions to the improvement of the profession of criminalistics. The recipient need not be a member of the Association.

Nomination period - open. There is no limit to the number of times an individual may be nominated however the award can only be given to an individual once.

Some past recipients: Members: Pay Pinker (1965), Paul Kirk (1966), Jack Cadman (1970), John Davis (1976), Lowell Bradford (1977)

Non-member: Bryan J. Culliford (1971)

CALL FOR NOMINATIONS - 1984 DISTINGUISHED MEMBER AWARD

The Awards Committee is requesting nominations for the 1984 Distinguished Member Award. This is an award presented anually to a member for significant contributions to the Association.

Nomination, using the attached form, will be submitted to the Awards Committee by mail. The Committee will screen the candidates' qualifications and submit their recommendation(s) to the Board, who will then select the recipient of the award. Although candidates must be members of the CAC, nominating parties need not be. No self nominations will be considered. The nominating period will be open from January 1 - 31, 1984. No nominations will be accepted after this period.

The Awards Committee has established the following criteria for candidate qualifications:

1. The candidate must be a CAC member (in any status) at the time of nomination.

2. The candidate shall have contributed significantly to the Association in one or more of the following areas:

   - Long term service to the Association as a member of the Board or a Committee.

   - Sustained production of papers or technical notes in newsletters or at seminars.

   - Organization of study groups or workshops, etc.

   - Significant research and dessemination of the information to the forensic science community (i.e. journal or newsletter publication, seminar papers, workshops or study groups, etc.)

   - Any other unusual or significant contributions to the improvemnt of the profession or criminalistics.

Nomination or receipt of the award in previous years shall not prevent a member for consideration in the current year. The award recipient will be announced at the Spring Seminar and will receive a plaque from the Association.

The Awards Committee is pleased that we will have this opportunity to recognize our colleagues who have contributed significantly to the Association and the profession. We would like to encourage as many nominations from each member or laboratory as possible.

Sincerely,

Karen Sheldon

Karen Sheldon
Awards Committee Chairman

Return Completed Form To:

Karen Sheldon, Awards Chairman
1122 Escobar Street
Martinez, CA. 94553

Distinguished Member Award

NOMINATION FORM

Please follow the criteria described on the attached letter.
Use this form only, use the back if necessary.
Any questions should be directed to Karen Sheldon (415)372-2455

CANDIDATE _____

EMPLOYMENT WHERE DATES

CONTRIBUTIONS (One or more contributions may be discussed. Do not use a separate form for each contribution)

NOMINATION PARTY (Please list two additional references should a clarification by the Awards Committee be needed).

NAME PHONE

1.

2.

3.

EMPLOYMENT OPPORTUNITIES

DOCUMENT EXAMINER. ILLINOIS STATE DEPT. LAW ENFORCEMENT

Requires a bachelor's degree and perferably professional foresnic science work experience in the area of document examination. The position is on a swing shift at the Maywood Forensic Science Laboratory. The salary is negotiable, based on experience. (See below for contact.)

LATENT FINGERPRINT EXAMINER. ILLINOIS STATE DEPT. LAW ENFORCEMENT

Requires a bachelor's degree and preferably two years of forensic scinece work experience in the latent fingerprint area. The position is at the Maywood Forensic Science Laboratory, and possibly on a swing shift. (See below for contact.)

TRAINING AND APPLICATIONS LATENT FINGERPRINT COORDINATOR. ILLINOIS STATE DEPT. LAW ENFORCEMENT

Requires a bachelor's degree and five years experience in the latent fingerprint area. (See below for contact.)

For the above three positions, contact (send resume) to Bruce W. Vander Kolk, Bureau Chief, Bureau of Scientific Services, 610 Armory Building, Springfield, Illinois 62706. Deadline 1/1/84.

ASSISTANT DIRECTOR. FORT WORTH POLICE DEPT. CRIMINALISTICS LABORATORY

Requires a bachelor's degree in Chemistry or Criminalistics and five years experience in Criminalistics.

Contact: Frank Shiller, Director, Police Dept. Criminalistics Lab., 1000 Throckmorton St., Fort Worth, TX 76102. (817) 870-6510.

CRIMINALIST II. FORT WORTH POLICE DEPT. CRIMINALISTICS LABORATORY

Requires a bachelor's degree in Chemistry or Criminalistics and three years experience in Criminalistics. Contact: Frank Shiller, Director, Police Dept. Criminalistics Lab., 1000 Throckmorton St., Fort Worth, TX 76102. (817) 870-6510.

DOCUMENT EXAMINER. BALTIMORE COUNTY POLICE DEPT. CRIME LABORATORY

Contact: Lt. R.L. Harclerode, Crime Lab Director, Baltimore County Police Department, 400 Kenilworth Drive, Towson, MD 21204. (301) 494-2290.

TEMPORARY CRIMINALIST I. KERN COUNTY SHERIFF'S DEPT.

Requires a bachelor's degree in Chemistry, forensic chemistry, biochemistry, criminalistics, or physics.

A temporary position (nine month maximum, with possible re-hire after 2 months layoff). This position is NOT currently available, but may become so at any time. Interested persons should submit their names so that they may be contacted as openings occur.

Contact: Vernon Kyle, Laboratory Director, Kern County Sheriff's Department Criminalistics Laboratory. (805) 327-8057.

SUBMISSION OF RESEARCH PROPOSALS FOR THE FORENSIC SCIENCE RESEARCH AND TRAINING CENTER

The Forensic Science Research and Training Center (FSRTC), which was dedicated as a part of the FBI Academy complex at Quantico, Virginia, on June 16, 1981, exists in large measure because of the influence exerted by the forensic science community in demonstrating the need for research and training. It is therefore, incumbent upon this community to continue to provide the FBI with information concerning current and projected research and training needs, and to assist in evaluating the results of the activities of the Center. In order to facilitate communications, the FBI requested the American Society of Crime Laboratory Directors (ASCLD) to form an operation and program committee for the FSRTC. the Forensic Science Operations and Program Committee (FSOPC) was founded after the 1981 annual meeting.

We recognize that within the forensic science community there are many scientists with worthwhile research ideas who do not have the resources to explore them. The FSOPC established as one of its goals the communication of research ideas to the FSRTC. The FSOPC has proposed a mechanism to encourage the various laboratories, associations or individuals in the field of forensic science to provide well thought-out ideas for potential research programs at the FSRTC while still recognizing the source.

This process will start with a short research proposal to be reviewed by a peer group composed of individuals selected from various regional and national forensic science organizations who have demonstrated expertise in the resepctive subject area. Their evaluations will be forwarded to the Research Coordinating Council which is comprised of members of the FSOPC and FBI Research Review Committee. The Council will then consider the recommendations of the peer groups and prioritize the research proposals. All proposals will be evaluated on their scientific merit, relevance and feasibility. Forensic scientists submitting proposals should realize: if the proposal is accepted and if the project is to be carried out at the FSRTC, they could remain associated with the project as a co-investigator and be a co-author on any subsequent publications. Programs are presently being considered to bring forensic scientists to the FSRTC to participate in research projects. Alternatively, they may wish to limit their participation to consultation with and frequent progress reports from the FSRTC.

In summary, the FSOPC is soliciting worthwhile research ideas from forensic scientists and attempting to facilitate their investigation using resources available at the FSRTC. If you have an idea, here is a mechanism by which you can receive recognition for your creativity and the forensic science community can benefit from your contribution.

INSTRUCTIONS FOR SUBMITTING RESEARCH PROPOSAL

The purpose of the proposal form is to provide information for the peer group review process. The scope of the projects is not limited and may range from method development and testing to basic research in an area applicable to forensic science.

1 - PROBLEM STATEMENT AND POTENTIAL BENEFITS: A specific statement of the problem area that this research will address and the potential benefits the solution would have to your laboratory or the forensic science community.

2 - OBJECTIVE: Briefly define the rationale or usefulness of this proposal. An explanation of the principles or hypothesis of the proposal would be included here.

3 - BACKGROUND: If you are aware of techniques, or related pertinent literature or of individuals working in this area please give a brief listing of these sources, including your own work (published or unpublished).

4 - PROPOSAL: Summarize your ideas for solving this problem. This can include the hypotehsis, methodology, expected results and rationale of your approach.

5 - RESOURCE REQUIREMENTS: List any specialized equipment, facilities, or supplies which might be required in this study.

The proposal form should be forwarded to the Forensic Science Operations and Program Committee, Forensic Science Research and Training Center, FBI Academy, Quantico, Virginia 22135.

In addition to the above five items, please include your name, agency, address, submission date and phone number.

REQUEST FOR COMPARISON OF OPEN HOMOCIDE PROJECTILES

Ward Francis Weaver, Jr. of Oroville is being held awaiting trial on homocide/rape charges. Prior to his arrest in Kern County, he was a trucker working throughout California and Oregon. Two weapons were recovered in connection with this subject - a Model 55 Winchester .30 WCF lever-action and a Ruger Single Six .22LR revolver. The rifling characteristics of these two firearms are as follows:

Winchester .30 WCF 6R

Bullet Diameter: .307-.308" (land-to-land)
Land Impression Width: .061-.064"
Groove Impression Width: .090-.093"

Ruger .22LR/.22 Mag. 6R

Bullet Diameter: .223-.224" (land-to-land)
Land Impression Width: .045-.046" (LR); .044-.046" (Mag)
Groove Impression Width: .066-.067" (LR); .064-.065" (Mag)

If you have open homocides with projectiles matching these class characteristics contact Lou Maucieri (916) 739-5136 to arrange for test-firings.

ELECTROPHORESIS SOCIETY FORMS A FORENSIC SCIENCE STUDY GROUP

At the recent meeting of the North American Section of the Electrophoresis Society, a group of individuals with interests in Forensic Serology and Paternity Testing got together and as a result of their discussions proposed formation of a subsection to include practitioners in those fields. The purpose of this letter is to inform these individuals of the existence of the society and some of the reasons for membership.

The Electrophoresis Society was formed by a group of investigators in the field after successful symposia held in the late 1970's. The first international meeting in the spring of 1981 at Charleston, S. C., was attended by several hundred participants. The society presently has a membership in excess of 600 worldwide, with approximately 50% being from North America. The purpose of the society is the timely exchange of information in all aspects of electrophoresis among practitioners in the field. This is carried out through publication of articles in the society journal Electrophoresis, annual meetings of the Regional sections and international meetings to be held every two or three years.

To aid prospective members in making a decision, the following ideas were discussed and are being offered:

1. At present, there is no organized group specifically addressing the entire field of electrophoresis as it effects forensic serology. It is felt that the Electrophoresis Society offers a ready made vehicle for this purpose.

2. The society, through its meetings and publications, can offer a rapid means for transmittal of new techniques to the forensic community. A newsletter has been proposed which would contain methods type articles, along with population genetics studies and other items of interest.

3. At national meetings, workshops of a hands-on nature would be held. These would be jointly sponsored by the society and industrial firms.

4. The formal and informal dessimination of information at meetings by noted experts in the field can be of invaluable assistance. It is in this aspect that the members of the study group have been most impressed at meetings attended.

It is strongly urged that every member of the forensic serology field consider membership in the Electrophoresis Society. Membership is $22.50 per year without journal subscription and $92.50 with journal. Billing for membership with journal can be such that the journal portion can be paid by ones laboratory. This would allow all serologists in a laboratory to be members without undue financial burden.

The members of the study group hope to see a large number of the forensic serology community at the next North American Section meeting at Tucson, Arizona, in October 1984.

To obtain membership application forms, write:

Dr. R. C. Allen
Electrophoresis Society
P.O. Box 956
Mt. Pleasant, S.C. 29464

AMERICAN ASSOCIATION OF BLOOD BANKS PARENTAGE SPECIMEN PROGRAM

The American Association of Blood Banks announces a new educational program for laboratories engaged in parentage testing. This program - the Parentage Specimen Program (PSP) - is by voluntary subscription. Every three months, participants will receive one 4 ml. whole blood specimen (and a hemolysate when indicated) as well as the results of a complete phenotyping of the specimen for red cell antigens, red cell enzymes and serum protein markers (as done by selected Reference Laboratories). Each specimen is to be tested by the participating laboratory using all test systems available for phenotyping.

The laboratory director or supervisor will receive this specimen and may have it processed as an unknown, after which the results obtained may be compared with those of the Reference Laboratories. The specimen can be used as the external control for part of the total quality assurance program of the participating laboratory. There will be no answers to mail in. The results can be checked immediately.

In addition, an effort will be made to assure that some of the samples contain rare phenotypes; these may be frozen and used as reference material at a later date.

Each mailing will also include a paper problem giving the phenotypes of the trio in a paternity case in which there is no exclusion of the alleged father. The participating laboratory can use this case to calculate a paternity index and a percentage probability of paternity. An analysis of this case will also be provided with each shipment.

PSP should be of interest to all laboratories that are involved in parentage testing and may be used as both an educational and management tool. It is available at $75.00 per year. If you are interested in PSP, contact:

The American Association of Blood Banks
(PSP)
1117 North 19th Street
Arlington, VA 22209

FIRST SYMPOSIUM OF THE COMMITTEE ON FORENSIC HAIR COMPARISON

The ad-hoc Committee on Forensic Hair Comparison held their first symposium at the FBI Forensic Science Research and Training Centre in Quantico, Virginia from May 31 to June 3, 1983. In attendance were hair examiners from a number of different forensic laboratories in the U.S.A., Canada and Britain as well as representatives from university forensic science programs, McCrone Associates Inc. and the National Bureau of Standards. This symposium was mainly concerned with three aspects of forensic hair comparison:

(1) Definition and Standardization of Terminology;

(2) Establishment of a Protocol for Hair Comparison; and

(3) Illustration of Hair Comparison Characteristics.

Each of these three areas was discussed by a sub-committee. Their recommendations were then presented to the symposium as a whole for discussion. The sub-committees then met again to revise and complete their recommendations.

The work product of the symposium will consist of two publications. The first will include a report on the meeting, a list of recommended terms and definitions relating to forensic hair comparison, a recommended hair comparison protocol and a list of macroscopic and microscopic hair characteristics. The second will be in the form of an atlas illustrating a wide range of macroscopic and microscopic hair characteristics. An announcement will be made in this journal as soon as these can be completed and made available.

It is the committee's plan to hold a second symposium in the spring of 1984. At that time, in addition to the continued discussion of hair comparison characteristics, three other areas will be addressed. These are:

(1) Conclusions and Court Testimony;

(2) Training of Hair Examiners; and

(3) Collaborative Testing.

The final day of the first symposium was devoted to formation and initial meeting of sub-committees to deal with these topics.

Anyone who has any ideas or material they would like to share with the Committee and anyone who would like further information can contact the chairman, Barry Gaudette, at (613) 993-0554, or write:

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EsD Typing of Bloodstains by Isoelectric Focusing

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Presented at the 62nd Semi-Annual Seminar
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Ontario, California
October 21, 1983

A recent report by Horscroft and Sutton[1] describes the focusing of EsD phenotypes. Their description of the EsD 2-1 banding pattern and their proposed location of the EsD 2 phenotype are in conflict with other published work [2-5]. They also performed a stability study and concluded that only stains up to 48 hours old could be successfully typed.

In this study, blood stains of known EsD phenotypes 1, 2-1, 2, and 5-1 were analyzed during room temperature storage for 25 days by agarose gel electrophoresis (TEMM pH 7.4) and isoelectric focusing (0.45 mm polyacrylamide gels, 5%T, 3%C, containing Servalytes(R) pH 5-7 and 5-6 at a 1:1 ratio) focused for 1½ hours at 1600 volts after a pre-run up to 1600 V at a 10 ma limit. Samples were applied 3 cm from the anode. After focusing, the side anodic of the application point was stained for EsD while the cathodic side was stained for PGM.

The phenotype patterns found by isoelectric focusing were in agreement with Olaisen, Kuhnl and Dykes and in conflict with those proposed by Horscroft and Sutton.

Additionally, although aged EsD stains showed progressive anodal banding when focused the EsD 5-1 blood stains were clearly differentiated by isoelectric focusing after 25 days storage while indistinguishable from the 2-1 stains by agarose gel electrophoresis.

REFERENCES:

1. HORSCROFT, G. and SUTTON, J., "An Evaluation of EsD Typing by Isoelectric Focusing", J. For. Sci. Soc., 23, 2, 139 (1983).
2. MARTIN, W., "New Electrophoretic Techniques for the Demonstration of Serum and Enzyme Polymorphisms Technical Improvements, Indications for a Farther EsD Allele." Arztl. Lab, 25:65 (1979).
3. OLAISEN, B., SILVERTO, A., JONASSEN, R., MERIAG, B. & GEDDEDAHL, T., "The EsD Polymorphism: Further Studies of the EsD 2 and EsD 5 Allele Products." Hum. Genet., 57:351 (1981).
4. KUHNL, P. & SPIELMANN, W., "Recent Developments in Isoelectric Focusing Techniques." Arztl. Lab, 27:255 (1981).
5. DYKES et al. "Frequency of the EsD *5 Allele in Three Ethnic Groups and Minnesota." Hum. Genet., 62, 162 (1982).

GLASS COMPOSITION AND MANUFACTURE

(Prepared by the Southern Trace Evidence Study Group)

DEFINITION:

The American Society for Testing and Materials (ASTM) defines glass as "an inorganic product of fusion which has cooled to a rigid condition without crystallizing."

COMPOSITION:

The mixture from which glass is made contains A and B and, depending upon circumstances, one or more of C, D or E.

A. Fundamental materials:

1. Almost invariably - silica (sand).
2. Usually - soda and lime.
3. Often - potash, lead oxide, boric oxide, etc.

B. Excess glass from a previous melt ("cullet").

C. Oxidizing agents.

D. Decolorizing agents - often added to mask the color produced by impurities.

E. Coloring or opacifying agents - color is normally produced by adding metal oxides to the melt.

METHODS OF PRODUCTION:

1. Clay Pot Method - Normally used for small batches (20 pounds - 2 tons) of specialty glass such as optical glass or special decorative glass.

2. Continuous Tank Method - The bulk of glass is produced by this method. Tanks range in size from 5-1000 tons. The tank is operated continously with raw materials being added at one end and the molten glass being drawn from the other end. Although there is no "batch"as such with this method of manufacture, there is still some variation in composition across the sheets of glass.

TYPES OF GLASS - By component and use.

1. Soda - lime Glass - Accounts for 90% of all glass tonnage made. Consists primarily of SiO_2, Na_2O and CaO with traces of MgO, BaO and Al_2O_3. This glass is used for most bottles and windows, electric light bulbs and some ophthalmic lenses.

2. Lead - alkali - silicate Glass - Consists primarily of SiO_2 and PbO with traces of Na_2O, K_2O, CaO, MgO, B_2O_3, Al_2O_3. This glass is used for decorative glassware, neon-sign tubes, video tubes, thermometer tubes, absorption of x-rays and for lens-making.

TYPES OF GLASS - By Component and Use. (continued)

3. Borosilicate Glass - Consists primarily of SiO_2 and B_2O_3 with traces of Na_2O, K_2O, CaO, MgO and Al_2O_3. This glass is used for sealed beam headlamps. Pyrex laboratory glassware and domestic ovenware.

4. Fused Silica and 96% Silica Glass - Expensive glasses used in laboratories for special purposes requiring ultra-violet transmission or high resistance to thermal shock.

Table 4-2 Approximate Compositions and Properties of Some Glasses[a]

DESIGNATION	SiO_2 %	Na_2O %	K_2O %	CaO %	MgO %	BaO %	PbO %	B_2O_3 %	Al_2O_3 %	DENSITY (g/cc)	REFRACTIVE INDEX (N_D)
Silica (fused silica)	99.5									2.20	1.458
96% silica	96.3	0.2	0.2					2.9	0.4	2.18	1.458
Soda lime-window	71-73	12-15[b]		8-10	1.5-3.5				0.5-1.5	2.46	1.510
Soda lime-plate	71-73	12-14		10-12	1-4				0.5-1.5	↕	↕
Soda lime-containers	70-74	13-16		10-13		0-0.5			1.5-2.5	2.49	1.528
Soda lime-light bulbs	73.6	16	0.6	5.2	3.6				1.0	2.47	1.512
Lead alkali silicate-electrical	63	7.6	6.0	0.3	0.2		21	0.2	0.6	2.85	1.539
Lead alkali silicate-high lead	35		7.2				58			4.28	1.639
Aluminoborosilicate-apparatus	74.7	6.4	0.5	0.9		2.2		9.6	5.6	2.36	1.49
Borosilicate-low expansion	80.5	3.8	0.4				LiO_2 used	12.9	2.2	2.23	1.474
Borosilicate-low electrical loss	70.0		0.5				1.2	28	1.1	2.13	1.469
Borosilicate-tungsten sealing	67.3	4.6	1.0		0.2			24.6	1.7	2.25	1.479
Aluminosilicate	57	1.0		5.5	12			4	20.5	2.53	1.534

[a] From 0.02 to 1% or more of Fe_2O_3 may be present in commercial glasses.
[b] Figures between columns represent percentage total of both columns.
SOURCE: E. B. Shand, *Glass Engineering Handbook* (New York: McGraw-Hill, 1958), pp. 4, 17.

FORMING OPERATIONS:

1. Hand - Involves glass blowing by hand or a combination of hand blowing and molding. This method is used primarily for art glass and fine tableware.

2. Mechanical

   a). Mold - Method for producing a non-flat glass object. This method is used for bottles, containers, headlamps, etc.

   b). Rolled - Method for producing flat glass. Patterned and wire reinforced glass are formed by this method. Rolled glass may be further smoothed in one of the following ways:

FORMING OPERATIONS: (continued)

1. ground and polished - where both surfaces are removed by grinding and polishing (plate glass).

2. float process - where the glass is rolled and then floated on a molten bath of tin alloy.

c). Drawn - Method used for producing cane and tubing.

SECONDARY FORMING OPERATIONS:

1. Annealing - Process of slowly cooling glass to allow for relief of stress and to make the glass more resistant to mechanical and thermal shock (most plate glass and containers).

2. Tempering - Process of rapidly cooling glass from a temperature near the softening point to maintain high compressive stress on the surface of the glass. Tempered glass is one form of safety glass and is commonly found in the side and rear windows of American cars.

3. Laminating - Process of fusing a vinyl plastic sheet between two sheets of polished plate glass to create a glass with high penetration resistance. Laminated glass is used in the windshields of most U.S. vehicles.

OBSERVABLE FEATURES:

flat surface

curved surface

surface texture or coating

thickness

color

shape

inclusions (e.g., bubbles, wire, etc.)

foreign material (e.g., paint, metal tape, etc.)

Ethical Dilemma

Peter D. Barnett
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In the September, 1982 Ethical Dilemma the problem of whether a criminalist employed by the defense was obliged to turn over to the prosecutor evidence he obtained from his own investigation on the defendant's behalf was considered. Based on the limited response to this case, it seems that this is not a problem that many criminalists feel is significant. Perhaps, this is because it is felt that this decision can be left to the lawyers--the criminalist, once he advises his own client of the existence of the evidence, has no further obligation. It is interesting to speculate about the obligations of the criminalist working for law enforcement to make sure that a defendant is advised of exculpatory evidence, but that is another topic.

This month I would like to present a slight extension of the topic in September, 1982 dilemma. That dilemma dealt with a situation in which a criminalist retained by the defense had gone to the crime scene and recovered the bottle which had contained acid allegedly thrown by the defendant at the victim. After recovering the bottle, the criminalist's examination revealed that the bottle had broken as a result of the bottle being thrown and striking a hard surface. In the original investigative reports the responding police officers had observed that the cap of the bottle had been "partially cut apart", presumably (or so the District Attorney would argue) to cause the acid to come out when the bottle was thrown. Thus, it was the prosecutor's contention, based on the observation of the bottle by the police officers, that the defendant had tampered with the bottle so that when it was thrown the acid it contained would get on the victim.

It was the defendant's contention that he simply had the bottle in his hand since he had just purchased it to use to clean some drains in the apartment building he managed. According to the defendant, he instinctively threw the bottle he had in his hand when the victim began to advance toward him in the midst of a heated argument. The defendant alleged he had not altered the bottle in any way prior before the incident. Clearly, the question of whether the bottle had been altered was relevant to the guilt or innocence of the defendant of the specific intent crime of assault with a caustic substance.

The defense attorney was prepared to make a Hitch motion that the failure of the police to preserve the acid bottle prevented the defendant from presenting evidence which could be clearly exculpatory. The advice of the criminalist retained by the defense was that, from an examination of the bottle had it been retained, it would probably have been possible to determine if it had been intentionally altered. Before this motion was heard, the bottle was recovered and examination revealed that, in fact, it had not been altered, but had broken as a result of impact when it was thrown. Although it seems that the presentation of this evidence at trial would have likely resulted in an acquital of the assualt with a caustic substance charge, the defense attorney wanted to proceed with the motion to dismiss the charges, or at least supress any evidence of the bottle of acid, based on the failure to preserve the evidence.

Would it have been proper for the defense attorney to pursue the motion based on the failure of the police to preserve evidence that she knew was, in fact, available? Would it have been proper for the criminalist retained by the defense to testify about what could be learned, hypothetically of course, from an examination of the bottle had it been retained? Would it have been ethical for the criminalist to refer the defense attorney to another consultant who would not be advised of the actual recovery of the bottle, and then could

testify as to what might have been done?

The last Ethical Dilemma dealt with the failure of a criminalist to preserve the gel from a cross-over electrophoresis analysis, and his subsequent assertion in testimony that it was impossible to do so. Some of those who responded felt that the criminalist's statement that the gel could not be saved was not an ethical violation. One anonymous respondent stated,

> "The average criminalist in the State of California who is a generalist displays this level of ignorance in at least one or more of the technical areas in which he practices...Partly because the average criminalist does not have the intellect, desire and commitment to be a generalist and partly because the level of supervision and management and training are lacking."

Roger Ely echoed this last sentiment when he stated,

> "One question that comes to mind in this circumstance is the source of the criminalists training. If the criminalist was properly instructed in the CEP technique, the preservation of gel must have surfaced at some point."

Although there was general agreement that it was necessary to "preserve the results of the analysis" not everyone, apparently, felt that preservation of the actual gel was necessary. Another anonymous writer states,

> "The forensic scientist has an obligation to document his observations of cross over electrophoresis--be it by staining and maintaining the gels, photographing, sketching, or noting (+) or (-) reactions."

This same writer continues,

> "To suggest that maintenance of breathalyzer ampoules is a comparable preservation of evidence is misleading and of questionable ethics. (That "suggestion" was made by the California Supreme Court in People vs. Hitch, pdb.)

Linda Wraxall takes another view:

> "It seems to me that in such an established technique as CEP it is common knowledge that drying the gel preserves it, therefore it can be kept for at least a certain amount of time after analysis. Especially, if it becomes the only evidence of the material...every criminalist should be aware of his ethical duty to preserve evidence where necessary (ie., where there is no further material available for examination and analysis at a later date)."

Ely makes this same point, stating that the criminalist has violated Section I.F. of the CAC Code of Ethics, the requirement to keep abreast of new developments. Ely states,

> "The most important violation of Section I.F. is not a result of the criminalist's ignorance of the CEP gel preservation, but of the criminalist's ignorance of the many recent legal decisions concerning the defendant's right to examine the evidence. Unlike other scientists, it is imperative the Criminalist keep abreast of all issues that effect the profession, and not just technical advancements."
>
> "With the major legal decisions of Washington State vs. Wright, Washington State vs. Vaster, and People vs. Nation (California Case) it is incumbent upon the Criminalist to recognize potential problems arising from the examination of evidence of a limited quantity. Even though these are not '...new developments in scientific methods...', their ultimate effect does weigh heavily in the scheme of examination."

Finally, Steve Shaffer finds no ethical violation has occurred, observing,

> "Perhaps we are premature in asserting that all analysts perform at a minimum level of...competence...without presenting those analysts with minimum standards against which their work will be measured. I am not suggesting that absent such standards we throw all requirements of competence to the wind, only that we must deal with many things which fall in the grey area between obvious wrongdoing and obvious competency. Further, absent such standards we probably have to afford the individual more latitude than would be (afforded) by written standards."

Response Sheet

The criminalist who recovered the acid bottle would___would not___ commit an ethical violation if he were to testify at a hearing for the motion to supress the evidence? What Sections of the CAC Code of Ethics apply?

It would___would not___be ethical for the criminalist to refer the defense attorney to another consultant for the purpose of testifying at the hearing? What Sections of the CAC Code of Ethics apply?

Comments:

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