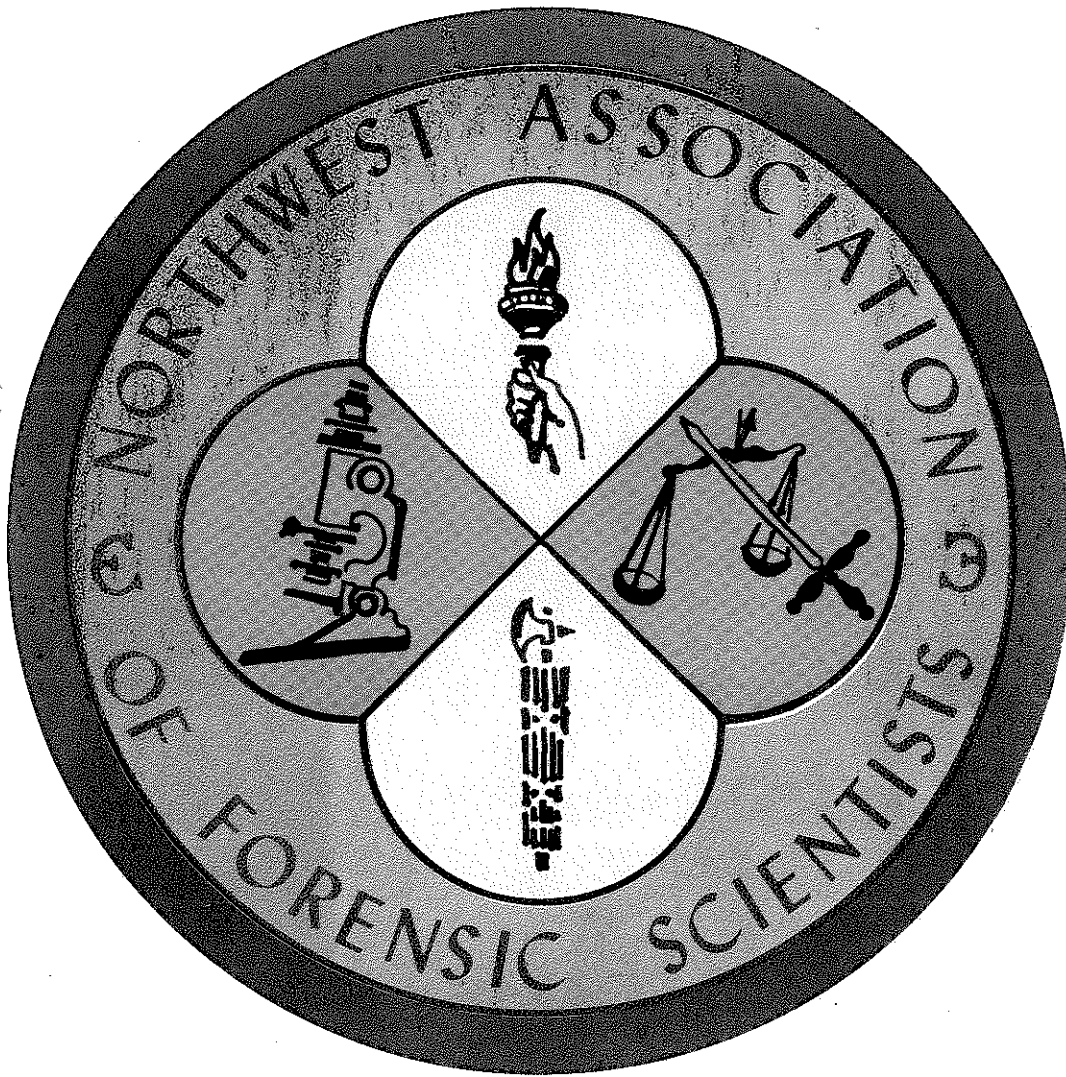


THE NEWSLETTER of



AUG. 1978

VOLUME IV, ISSUES I & II

NORTHWEST ASSOCIATION OF FORENSIC SCIENTISTS

EXECUTIVE COMMITTEE

PRESIDENT.....ANN BRADLEY
VICE PRESIDENT.....ARNOLD MELNIKOFF
SECRETARY-TREASURER.....FLOYD WHITING
EXECUTIVE COMMITTEE MEMBER-AT-LARGE.....JOHN SPILKER
PAST PRESIDENT.....KAY SWEENEY

COMMITTEES

ETHICS.....ARNOLD MELNIKOFF
JAN BECK
CHARLES VAUGHN
MEMBERSHIP.....BRAD TELYA
ALAN GILMORE
ANN AMES
HISTORICAL.....FLOYD WHITING
JOHN LONG
TECHNICAL PROFICIENCY COMMITTEE.....KEN KONZACK

UPCOMING MEETING

OCTOBER, 1978

RENO, NEVADA

PROGRAM CHAIRMAN - ENRICO TOGNERI

Washoe County Sheriff's Crime Laboratory
170 South Sierra
Reno, Nevada
Phone: (702) 785-6220

THE NEWSLETTER

A Newsletter published by the Association dedicated to the

- (1) encouragement of the exchange of ideas and information within the field of forensic sciences through improving contacts between persons and laboratories engaged in the forensic sciences,
- (2) stimulation of research and the development of new and/or improved techniques and,
- (3) promotion of the improvement of professional expertise of persons working in the field of forensic science.

SUGGESTIONS FOR CONTRIBUTORS

The Newsletter includes the following regular features:

1. Correspondence and Inquiries (letters).
2. Methodological Notes (Bench Top).
3. Abstracts of papers presented at NWAFS meetings.
4. Short Technical Reports.
5. Case Reports.
6. Employment Opportunities.
7. News of meetings, schools, workshops, training opportunities.
8. Legal News
9. Editorials

Contributions should be titled, include author credits and any pertinent references. The contributions should be typed, single spaced on plain white paper and compacted as much as possible. Articles published in this newsletter do not necessarily express the opinions of the Editor or the Association.

Submit all contributions to the Newsletter Editor:

DARYL BRENDER
EASTERN WASHINGTON STATE
CRIME LABORATORY
ROOM 100
PUBLIC SAFETY BUILDING
SPOKANE, WASHINGTON 99201

The Newsletter is published four times a year. Contributions should be submitted by February 1, June 1, August 1 and November 15, each year.

President's Message

Taking stock with three months left in my term of office, I find we have had a frustrating but still rewarding year. There were projects I had hoped to move forward on, such as a more formal budget presentation and allocation, which never came to fruition. Yet it was a year when the organization showed incredible strength. We were blessed (?) with the fact that a bookkeeping error left us in the red for several months, and that due to losing financial records in the mail we didn't know for sure how we disbursed all our reserve. Yet we survived, with special thanks for their understanding and cooperation to:

- 1). Daryl Brender - who was told the Newsletter would have to be curtailed, and who explored ways to make it more self supporting.
- 2). Bob Sager - who was told that he must not go in debt, putting on a meeting in one of the more expensive cities in the West. Not only did he accomplish that, but because of a change from the Hotel's quoted estimates, we made \$220. Well done!
- 3). Ken Konzak and the volunteers on the proficiency testing program. As soon as I was aware we were in debt, I told Ken that we could not promise reimbursement to any lab sending out samples. Even so, the volunteers responded and samples continued to be mailed. What great support.
- 4). The general membership - who in most cases mailed in payment for past dues and were supportive and understanding once the situation was explained.
- 5). Future members - we received support from lab personnel in Reno, Nevada, and Vancouver B. C. who volunteered to take on the responsibility for hosting a meeting, without even being full members of the organization.
- 6). Floyd Whiting: Most of all Floyd has had to bear the load of our fiscal worries. From having to answer to the hotel as to why our bill wasn't paid, to advancing the organization a sizeable personal loan, he has carried us through. Moreover, he had the frustration of dealing with incomplete records and lack of help from his predecessor. We all are greatly indebted to him.

So you can see the strengths we have shown which have enabled us to weather our difficulties. In addition, we have learned some weaknesses and will be even stronger as we move to correct them. My thanks to those above and all of you who have helped me personally or supported the organization. It has been a pleasure to serve as President of such a fine Association.

Northwest Association of Forensic Scientists
Business Meeting - June 16, 1978
San Francisco, California

The meeting was called to order by President Ann Bradley.

I. The minutes of the last meeting held in Portland, Oregon, were adopted as published in the December 1977 Newsletter Vol. III, No. 4.

II. -TREASURER'S REPORT by Floyd Whiting.

1. The treasurer's report at the previous meeting indicated that the Association had a net balance of \$992.81. An audit staff of Bob Dews, Bob Sager, and Floyd Whiting was appointed after that meeting to audit the Financial records so that the books could be transferred from Dews to Whiting. At the meeting, it was discovered that, rather than possessing a surplus, the expenses of the Association exceeded our assets. Dews collected the records and receipts of his transactions; but unfortunately, they were lost by the U.S. Postal Service. Dews transferred \$1268.00 from the old NWAFS account in Idaho to the new account that was established in Seattle. Existing unpaid bills at that time included \$71.28 due to a firm in Idaho and a \$1491.97 hotel bill unpaid since the Seattle meeting.

2. Additional expenses:

Costs of Portland Meeting	\$3,189.99
Newsletter	101.90
Plaques (past-presidents and Distinguished Service Awards).	215.43
Certification Committee Mailing Costs (by Kay Sweeney).	36.90

3. Income:

Income from Portland Meeting	\$2,771.00
Dues	1,500.00
Advance on Vendor's fees from Bob Sager	100.00

Dues payments included \$105 from applicants who are not yet members and \$240 collected on the previous year's (1977) dues. The \$105 will be applied to the applicants' dues when they become members.

4. Net balance in the NWAFS treasury on June 13, 1978 \$ 674.85

III. REPORTS OF STANDING COMMITTEES

1. Executive Committee: by Ann Bradley

Results of the Executive Committee Meeting included listing the temporary actions taken by the Committee since the previous NWAFS meeting, in an attempt to control our fiscal plight.

A. Laboratories participating in the Proficiency Tests would receive no reimbursements for their costs.

B. The Newsletter was limited to a single issue since the Portland meeting.

Minutes of Business Meeting of NWAFS

- C. The Executive Committee reversed a previous decision (which was adopted before our current fiscal difficulties were realized) that would have prevented the Treasurer from billing members for unpaid dues for 1977. No dues statements had been mailed out in 1977, but by reversing the Executive Committee position, an additional \$240 was raised.
- D. Bob Sager was instructed to take any steps necessary to insure that the current San Francisco meeting did not result in a deficit. Bob stated that part of the reason for the high registration fee of \$60 for this meeting was to compensate for loss of income from having several of the vendors back out from exhibiting their products. This action occurred shortly before the meeting.
- E. A review of estimated budget costs were studied. The costs were only approximate since the records had been lost in the mail.
- a) If the participating labs had not absorbed the costs, this year's proficiency program would have cost \$180. Ordinarily, the proficiency program would cost \$200-\$400 per year.
 - b) Four issues of the Newsletter per year would cost approximately \$400-\$500.
- F. The Executive Committee decided to increase membership dues from \$15 to \$20 per year. A membership of approximately one hundred people would thus provide enough money to meet the Association expenses, plus provide a cushion for emergencies.
- G. A decision was made to set up guidelines for meeting costs which would be adhered to by the program chairman. The guidelines would provide a list of expenses which the chairman can incur without Executive Committee approval; if there are other expenses, such as for a workshop during the meeting, Executive Committee approval would be required.
- Ann reminded the membership that for meetings to break even, adequate attendance is necessary. Therefore, when members vote for meeting sites, they should consider how many people can attend and how high the costs will be. The Association might also consider holding the meetings in second-line hotels instead of expensive downtown city hotels.
- H. The option of having advertising in the Newsletter was discussed. Daryl Brender, as editor of the Newsletter, presented his views to the membership for consideration. He stated that notable instrumentation and scientific organizations in the U.S. would be willing to pay \$50-\$100 a page for black and white advertising, with a minimum of five issues going to their company for their circulation. If the average cost of publishing the Newsletter was approximately \$100 an issue, two pages of advertising would make the Newsletter self-sufficient. Since our publication is a Newsletter rather than a journal, we avoid the legal complications which would occur if we had copyright laws to deal with. Possible ads would be by Waters, Hewlett-Packard, Perkin-Elmer, Leitz, or Nikon. The quantity of advertising would never be permitted to exceed three pages. The cost of \$50 or \$100 would be at Daryl's discretion. In response to a question, Daryl stated that if a question concerning the legitimacy of the ads arose, he would go to the Executive Committee for a decision.

Minutes of Business Meeting of NWAFS

H. Continued:

Daryl then made a motion that "The Newsletter editor have the right to put in advertising in the Newsletter to help make it self-sufficient." The motion was seconded and adopted with ten votes in favor and one opposed.

- I. Consideration of the "3-year rule" requiring that a member must attend a NWAFS meeting at least once every three years, was discussed. The Executive Committee was unhappy that due to this constitutional provision, Tony Longhetti had lost his membership at the previous meeting. Consequently, the Executive Committee decided to draft a constitutional amendment to change the rule, and have the amendment voted on at the next fall meeting. The approximate wording of the amendment would be to remove the current inflexible position and replace it with one stating that, "After 3 years, if a person has not attended a meeting, his membership be reviewed by the Membership Committee and they could recommend to the Association any appropriate action, including termination". During the discussion, George Ishii voiced his disapproval because the amendment provided no guidelines. He suggested that the Membership Committee develop some criteria; and based on that criteria, decide what action to take.

In concluding the Executive Committee report, Ann stated that the Association could overturn Executive Committee decisions by a 3/4 vote of the assembled members. No motion was made to reverse any of the decisions.

2. Proficiency Committee: The report was previously given during the regular meeting.
3. Historical Committee: No report because the committee lost its chairman, Bob Dews. Ann Bradley has not decided on the makeup of the committee during the interim before the next election. Currently, the committee consists of the past-past president - Floyd Whiting, and John Long from Portland, Oregon.
4. Publication Committee: Daryl Brender had nothing further to present in addition to his proposal for advertising in the Newsletter.
5. Membership Committee: Presented by Ann Bradley for Chairman Brad Telyea

The following people have completed their applications and will be considered for membership at the fall meeting:

From Oregon State Police Crime Labs:

Elizabeth Guenther
Mike Hurley
Tom Jenkins
Steve Strauss
Lenton Von Beroldingen

Eugene Police Department:

Mary Vaughan

Clark County, Washington:

Curtis Reinbold

Minutes of Business Meeting of NWAFA

5. Membership Committee: Continued:

Western Washington State Crime Laboratory:

Lynn Kelso

Montana State Crime Laboratory:

Vicki Waldron

Alice McClellan

Jennifer Ehreth

Wyoming State:

Howard Herr

Santa Rosa Crime Laboratory:

Robert Ogle

Alcohol, Tobacco, Firearms:

Elliot Byall

Royal Canadian Mounted Police Crime Laboratory (Vancouver):

Diane Eileen Truelove

Wayne Kenneth Jeffrey

Richard Allen Bergman

John Elsoff

Nancy L. Ziegler

Julia Anne Graham

Ralph Donald Kwosny

Sandra K. Lord

A.A. Dregar

Howard Ivan Kalyn

IV. REPORTS OF SPECIAL COMMITTEES

1. Distinguished Service Awards Committee: Presented by Ann Bradley for Chairman Bill Dunagan.

The Committee requested that nominations for the award be mailed soon to allow the Committee time to consider the nominees and prepare the plaque.

2. Ethics Committee: Presented by George Ishii for Chairman Arnold Melnikoff.

The results of the survey for the wording of the standards of professional conduct were reported:

The Northwest Association of Forensic Scientists propose the following standards of professional conduct to which each member should prescribe:

- 1) One shall not give an expert opinion concerning evidence one has not personally examined, when such evidence was available for examination (excluding testimony relevant to the "State of the Art").
- 2) One shall not willfully fail to perform examinations, willfully exclude the results of examinations, or in any way willfully misrepresent the result of an examination in order to support, or weaken, an advocate position in court.
- 3) It is the expert's responsibility to search for the most pertinent and representative comparison standards.
- 4) It is the expert's responsibility to search for, and employ, adequate and sufficient materials, standards and tests on which to base his opinion.

Minutes of Business Meeting of NWAFS

2. Ethics Committee: Continued:

- 5) One shall responsibly perform examinations and accurately report all results and conclusions so that truth and justice are served.

Results of Survey of Standards of Professional Conduct

65 replies were received

- 1) Agree 46 Disagree 10

Excluding testimony relevant to state of the art

Agree 9

- 2) Agree 55 Disagree 5

- 3) Agree 39 Disagree 21

- 4) Agree 50 Disagree 8

- 5) Agree 50 Disagree 7

- 6) Additional comments, suggestions or other proposed standards of professional conduct

In regards to 1) "only agree if in court added after expert opinion"
"I might be able to offer an expert opinion about a specific analytical procedure based upon 20 years experience without the necessity of actually analyzing the specific sample."

In regards to 3) "should be included in 4)"
"3) is weaker way of stating 4)"
"How diligent a search for a pertinent standard should one make?"
"3 and 4) not needed because of 5)"

"There should be added another standard of professional conduct stating... all analyses should be performed in a timely manner.:"

Two individuals who responded to the survey were opposed to any formulation of a code of professional conduct.

The other comments received are too lengthy to be reproduced unless four pages are added to this report.

Arnold Melnikoff, Chairman of Ethics Committee

In all cases there was overwhelming agreement on the choices. In some of the cases, the concept was fine but the wording bothered some people. For example, the word "most" in the third statement was bothersome. George felt that the language needed to be redone while retaining the concept. After discussion, Ann directed the Chairman of the Ethics Committee, based on his survey, to draft a constitutional amendment to be circulated by Newsletter so that it may be considered at the fall meeting.

Minutes of Business Meeting of NWAFS

V. NEW BUSINESS

1. Results of the mail ballot for the fall meeting site:

Reno - 36
Boise - 23
Spokane - 3

The meeting will be in Reno in late October. Program Chairman is:

Enrico Togneri
Washoe County Sheriff's Crime Laboratory
170 South Sierra
Reno, Nevada 89501 Phone: (702) 785-6220

2. Vancouver, B.C., and Boise were nominated as sites for the Spring 1979 meeting. After discussion, Vancouver was awarded the site by a vote of 8 to 2. The meeting will be in Vancouver with Mr. E.J. Fennell as Program Chairman.
3. Joe Power suggested that there be segregation of smokers and non-smokers at NWAFS meetings. During the ensuing discussion, George Ishii stated that there was little demand for non-smoker tables in restaurants. Further discussion occurred, but no decision was reached.

There being no further business, the Spring 1978 Business Meeting was adjourned by President Ann Bradley.

Floyd Whiting
Secretary-Treasurer

ETHICS COMMITTEE CHAIRMAN'S COMMENTS

It is my personal opinion that it will be difficult to propose a code of ethics which would be mutually agreeable to a majority of our membership unless it is a code of platitudes, without much weight. This is partially due to the fact that we have a broad spectrum of individuals representing all the respective disciplines of forensic sciences. What might be considered appropriate and necessary in one discipline, may be considered less appropriate and of less importance in another discipline. For example, obtaining necessary and appropriate standards is the responsibility of a forensic chemist to identify a specific substance. Obtaining sufficient exemplars necessary to obtain a conclusion in questioned documents is usually considered to be the responsibility of an investigator and may not be considered proper for the examiner to personally have the responsibility to do in all cases he examines.

I feel a more appropriate method of dealing with a member who conducted himself in a manner which would not be considered ethical or appropriate of the membership of the association would be to propose a constitutional amendment to deal with the problem. The executive board of the association would choose six members to hear and review the allegations and they could then revoke the membership of the individual if they felt it was warranted. It would be very difficult to propose a code of ethics which clearly defined all possible situations where a member would be clearly unethical in his conduct. The constitutional amendment I recommend would not be subject to interpretation of the written word, but would be applicable to each allegation of unethical conduct on a case by case basis.

Sincerely,

CRIMINAL INVESTIGATION LAB

Arnold Melnikoff

Arnold B. Melnikoff
Bureau Chief
Forensic Scientist

CONSTITUTIONAL AMENDMENTS

The following constitutional amendments will be voted on at the Fall 1978 Meeting. The current wording is struck out, and the new words are underlined.

① TO CHANGE THE DEADLINE FOR SUBMISSION OF APPLICATIONS

Proposed, that the By-Laws Chapter I, Section 1 (a) (1) be changed to read "...The final date for the submission of application and endorsement forms to the secretary-treasurer is ~~July-1~~ August 1 of the year in which the applicant wishes to be considered for provisional membership.

PRO: This was proposed as a motion at the business meeting September 30, 1977. This change would allow more time for applications to be considered after our Spring meeting. The July 1st deadline means those hired at the start of a July 1st fiscal year have to wait more than one year to be made members. In some cases where membership in an organization is a condition of promotional advancement, this is a real hardship. August 1st is still far enough in advance of the Fall meeting for all necessary action.

CON: If the Fall meeting is scheduled for September, there may not be sufficient time for the Membership Committee to consider the applications, especially if clarifications or investigations are needed. Also, there needs to be sufficient time for the list of prospective applicants to be published in the newsletter.

② TO NEGATE SENDING APPLICATIONS TO SECRETARY-TREASURER

Proposed, that the By-Laws Chapter I, Section 1 (a) (1) be changed to read: "...The final date for the submission of applications and endorsement forms to the ~~Secretary-Treasurer~~ Membership Committee Chairman... Delete paragraph (2) and renumber (3) to (2).

PRO: These changes would route the membership applications directly to the Membership Committee chairman. It is an unnecessary complication and a chance for them to be lost if they go first to the Secretary-Treasurer.

CON: This procedure was included probably anticipating that money would accompany the application. It makes sense for all funds to go to the Treasurer directly. Also it is the Constitutional duty of the Secretary-Treasurer "to receive and care for all business records and papers belonging to the Association" (Chapter 2, Section 3).

③ TO CHANGE RECALL REQUIREMENTS ON EXECUTIVE COMMITTEE DECISIONS

Proposed, that the By-Laws Chapter II, Section I, be changed to read "...Any decision made by the Executive Committee is subject to recall by ~~three-fourths~~ (3/4)-vote-of-the-voting-members. a simple majority vote of the voting members.

PRO: This is a modification (by the author) of an amendment he proposed at the business meeting on September 30, 1977. It was felt the current constitutional requirement almost insured that the membership could not overturn an Executive Committee action. A simple majority vote would be easier to obtain and could be accomplished by petition, by mail ballot or by a heavily attended business meeting. (Please note: Both the current constitution and this proposed change refer to 1/2 vs. 3/4 of the total voting membership, not just the voting members present at a business meeting.) Decisions made by motion at a business meeting pass with only a simple majority of those present, so why have such stringent requirements to change the decisions of the Executive Committee?

CONSTITUTIONAL AMENDMENTS

CON: The Executive Committee is constitutionally responsible for the general management of the Association, including levying of dues. Its decisions should not be overturned lightly. They would not be able to function effectively if their actions were being reversed frequently.

4 TO SPECIFY WHO SITS ON BOARD OF DIRECTORS OF CORPORATION

Proposed, that the By-Laws Chapter II, Section 1, be changed by the following addition: The members of the Executive Committee shall serve as the Board of Directors of the Corporation.

PRO: This is a "house-keeping" amendment to fulfill the requirements of the Articles of Incorporation. They state that the Constitution and By-Laws will specify which officers make up the Board of Directors.

5 TO ELIMINATE PAST SECRETARY-TREASURER AS CHAIRMAN OF HISTORICAL COMMITTEE

Proposed, that the By-Laws Chapter III, Section 2 (c) be changed to read: Historical Committee Consisting of the Past-Secretary-Treasurer-as-Chairman, the Past-Past-President and one two appointed members; any of the three may be appointed chairman.

PRO: The Secretary-Treasurer's job is a very heavy one. After serving in that capacity, there may not be much enthusiasm left for serving as an effective Historical Committee Chairman. This change would allow the President to involve additional people in the running of the organization, and to chose those who would be active committee members.

CON: As currently composed, those on the Committee are most likely to have records and remembrances of recent meetings.

6 TO CHANGE TERMINATION OF MEMBERSHIP FOR NON-ATTENDANCE

Proposed that the By-Laws Chapter I, Section 3, (c) be changed as follows: The Membership Committee, when notified by the Secretary-Treasurer that a member has failed to attend six (6) consecutive meetings of the Association, will automatically terminate the membership of the said member and the Secretary-Treasurer will strike his name from the list of members. will review the status of the said member. They will recommend appropriate action, which may include termination of membership. The Membership Committee will establish and make known to the general membership the criteria they will use to recommend appropriate action.

PRO: This change allows for some leeway in action when members have not attended a meeting in three years (6 meetings). Currently there is no Constitutional action possible except termination, no matter how extenuating the circumstances. The criteria to be used by the Membership Committee in recommending action would be made known and publicized. This would insure their recommendations for leniency were consistent, and non-attending members would know under what circumstances they might be considered for retention vs. termination.

CON: Anyone who wants to be a member of this organization should somehow be able to attend once every three years. If such a person is still interested and has been terminated for non-attendance, he/she can immediately reapply. If voted in, one could have another three years to attend a meeting (provided dues were paid).

A New, Rapid Method for the Detection of Basic Drugs in Whole Blood, Using Gas Chromatography-Nitrogen Phosphorous Detection.

Ladislav Kopjak¹ and Wayne O. Pierce²

¹Center for Human Toxicology, University of Utah, Salt Lake City, Utah 84112

²Bureau of Laboratories, Utah State Division of Health, 44 Medical Drive, Salt Lake City, Utah 84113

ABSTRACT

An analytical method is presented for the detection of more than one hundred basic drugs of toxicological interest in postmortem medico-legal and law enforcement cases. The method involves a single stage n-butyl chloride extraction of 1.0 ml of whole blood buffered to pH 9.0-9.5. No back extraction or cleanup steps are required. Extracts are injected on 3% OV-1 and 3% OV-17 columns coupled to nitrogen phosphorous detectors. Sensitivity limits are drug dependent and range from 200-500 ng/ml in the blood sample. Emphasis will be placed on extraction and quantitation techniques.

DRIED BLOODSTAIN ANALYSIS PROGRAM AT THE ALAMEDA COUNTY

SHERIFF'S DEPARTMENT CRIME LABORATORY

by

Patricia L. Zajac, Criminalist

A collaborative research effort to develop improved, simplified and practical methodology for bloodstain analysis was initiated in 1974 between the Alameda County Sheriff's Department Crime Laboratory and the University of California's White Mountain Research Station at Berkeley. At the time the research began, the capability of the ACSD Crime Laboratory was limited to species determination by cross-over electrophoresis and ABO typing. As a result of the collaborative research work, the Crime Laboratory is now routinely analyzing for eight enzyme/protein genetic markers in bloodstains by electrophoresis using cellulose acetate support medium. The total number of blood/bloodstain analyses increased from 87 in the year 1973-74 to 796 in the year 1976-77. Results obtained by this laboratory for the PGM, EsD, EAP, G6PD, Hb, AK, Gc, and ADA systems and brief description of analysis time and procedures were presented. It was illustrated how the uniquely favorable operating parameters of this system, particularly the significantly reduced analysis time, can permit the small crime laboratory to increase their informational input into the criminal justice system.

The Multisystem Analysis of Blood Stains

Brian G. D. Wraxall*, Metropolitan Police
Laboratory, London, England**

Mark D. Stolorow, Michigan State Police
Laboratory, Northville, Michigan

The combination of two or more polymorphic enzymes or proteins onto one electrophoretogram has been and still is a goal of many forensic scientists. Not only does it save time and require less equipment, but it enables the serologist to obtain far more information from a smaller blood stain. However, this goal has not been easily achieved because each genetic marker has typically been phenotyped under individual conditions of time, voltage, pH, and ionic strength.

Under a L.E.A.A. sponsorship, eight polymorphic enzymes and protein systems: PGM, EAP, EsD, GLO I, AK, ADA, Hp, and Gc, have been examined with a view to phenotyping two or more of them in a single electrophoretic cell. Simultaneous separation of all these markers in only three cells has been achieved with no loss of activity and with an increase in detectability and reliability in many cases.

The results achieved under this contract will be shown; the problems of multisystem analysis and its application to the crime laboratory will be discussed.

THE PROBLEM OF "KNOWN" WRITING SAMPLES IN HANDWRITING COMPARISONS

by Floyd Whiting, Document Examiner
Western Washington State Crime Lab

Two examples of the problems Document Examiners face when evaluating "known" writing standards which are furnished for comparison with "questioned" handwriting, were presented. "Known" standards consist of request specimens and collected specimens.

The advantage of request specimens are:

1. they are usually witnessed and are more easily introduced into court;
2. they can be verbatim examples of the questioned writing, which provides better examples for comparison.

The advantage of collected specimens is:

1. the possibility of disguise is eliminated.

Generally, Document Examiners who work for public agencies rely more on request specimens and those who work as private examiners rely more on collected specimens.

Two separate cases of a male school teacher accused of statutory rape due to sexual involvement with a student, were then presented. In each case, handprinted letters written by the teacher to the student were submitted for document examination. Request specimens of handprinting submitted by the teacher was different in form from the printing on the letters. Although the possibility of disguise was suspected, the printing style of the questioned documents were internally consistent and the style of the request specimens were also internally consistent. It was only after the submission of additional collected specimens that it was learned that each teacher had two separate styles of handprinting. From the additional collected samples it was shown that the suspects had, indeed, written the questioned letters to their paramours.

The conclusions drawn from the examples were:

1. It is important for document examiners to get proper "known" standards, including collected specimens, when examining handwriting.
2. Despite consistent dissimilarities in writing, a suspect cannot always be eliminated because disguise may have been used.
3. Because of the difficulty in eliminating suspects, the Western Washington State Crime Lab Document Section is unable to eliminate as many suspects as it is able to identify.

A final observation made from the examples presented was that serologists working on seminal stains are not the only forensic scientists who receive sexy cases!!

METHOHEXITAL POISONING, A CASE REPORT

(C. M. Kirkwood¹ and M. W. Yip¹)

CASE HISTORY

A 41 year old male anaesthetist apparently depressed spoke to his supervisor 3½ hours before being discovered in the back seat of his car at his home, with an intravenous drip into his left arm. Resuscitation measures were started immediately but to no avail.

At the scene the Doctor found:

- (1) no pulses in the wrist or neck
- (2) nail beds were blue
- (3) pupils were medium size
- (4) right arm was a bit stiff
- (5) jaw was getting stiff
- (6) suicide note
- (7) empty intravenous bottle and tubing with a trace of fluid.

PATHOLOGY

Lack of significant findings except:

- (1) General Visceral Congestion
- (2) Fresh needle puncture over left antecubial fossae.

METHOD

ACID TUNGSTATE

- (1) - 10 ml hot water
 - sample
 - I. S. Aprobarbital
 - 5 ml 10% sodium tungstate
 - 5 ml 2/3 N. H₂SO₄
 - mix well and centrifuge.
- (2) - Aqueous acid phase was extracted with CHCl₃ and back extracted into 0.45 N. NaOH.
- (3) - NaOH was acidified and extracted into CHCl₃.
- (4) - CHCl₃ is evaporated to dryness under N₂ in 70° water bath.

QUANTITATIVE ANALYSIS

Samples were compared to known methohexital standards carried through the

above procedure on the gas chromatograph.

IDENTIFICATION

- (1) U. V. - barbiturate procedure with peak at 247nm with no shift at pH 10.5.
- (2) T. L. C. - CHCl_3 : acetone (9:1) solvent system
- HgSO_4 followed by D. P. C. followed by KMnO_4 .
- (3) G. L. C. - 3 foot glass column
- 3% OV-1 on gas Chrom Q, FID, N_2 carrier gas
- Column 150° isothermally
- Aprobarbital I. S.

TOXICOLOGICAL FINDINGS

Blood - negative alcohol

- 9.8 mgm% sodium methohexital

Liver - 8.2 mgm% sodium methohexital

*Note - Direct extraction of the blood and subsequent G. C. analysis gave 9.6 mgm% sodium methohexital.

CASE EXAMPLE

Brian Finkle - personal communication found in Isolation and Identification of Drugs, E. G. C. Clarke.

	Finkle's	Ours
Blood	10.3 mgm%	9.8 mgm%
Liver	4.1 mgm%	8.2 mgm%

¹City Analyst's Laboratory, Toxicology Section, 238 East Cordova Street, Vancouver, B. C.
V6A 1L3 Canada.

IDENTIFICATION OF GASOLINE SOURCE BY LEAD ALKYL COMPARISON USING GAS CHROMATOGRAPHY WITH ELECTRON CAPTURE DETECTOR

Herbert A. Frank, Criminalist, Calif. Dept. of Justice, Salinas Regional Laboratory

Lead alkyl profiles of gasoline can provide three to seven parameters which can be of use in gasoline comparison. The method has been used in identifying leaking gasoline tanks by comparing lead alkyl profiles of samples collected from sewers, coil and asphalt. The method is applicable in arson cases where samples are collected from mini-pools, soils or rugs where heat and extreme evaporation has not substantially altered the lead profile. Vendor tanks generally have individualized lead profiles due to batch mixing. Some major brand gasolines have distinct class lead alkyl profile characteristics. The absence of lead can also be a significant factor. Experimental conditions: Column: 6 ft.-20% 1,2,3-Tris-2-Cyanoethoxy Propane (TCEP) on Chromosorb W 100-200. Column Temp: 70°; Injector: 200°; Detector: 200°; Flow Rate: 25cc/min.

WHAT DOES AOAC HAVE TO DO WITH FORENSIC SCIENCES?

Forensic scientists who examine bloodstains on stolen vehicles, fiberglass insulation on a burglar's coat, and voiceprint identification of crank callers may not normally affiliate themselves with analytical chemists testing for components of foods and drugs.

But the AOAC has done considerable work with forensics over the past several years and is interested in inviting more forensic scientists to become involved in the organization.

Bruce Given, Chief Investigative Officer for Naval Investigative Services (2461 Eisenhower Ave., Alexandria, VA 22331), is AOAC's General Referee for Forensic Sciences. Under his direction, forensic scientists are pursuing work on 24 different topics. (See box).

AOAC has held several well-attended symposia on Forensic Sciences during its Annual Meeting in Washington, DC. Topics discussed have covered most of the items listed for study.

AOAC's 1000 page compendium of standardized methods, Official Methods of Analysis (12th Ed., 1975), has one chapter on Forensic Sciences with two officially approved methods--Latent Fingerprints, 45.001, and Characterization and Matching Glass Fragments by Dispersion Microscopy, 45.002. The volume also contains a chapter on Illicit Drugs, with methods for heroin, 40.003, LSD, 40.006, and marijuana, 40.010.

Associate Referees in the Forensic Sciences represent a cross section of federal, state, and private forensic labs. The FBI, Bureau of Alcohol, Tobacco and Firearms, Center for Disease Control, Michigan and New Jersey State Police, Wisconsin State, Bridgeport Regional, and Post Office Crime Labs, University of Montana, and Walter C. McCrone Associates all carry out methods work through AOAC.

And Richard Brunelle, of the Bureau of Alcohol, Tobacco and Firearms, former Forensic Sciences General Referee, is the representative to the AOAC for the American Academy of Forensic Sciences.

Yet many forensic scientists ask why it is advantageous for them to work with the AOAC.

The main reason is that AOAC has a system of validating methods of analysis which gives them "watertight integrity", as Bruce Given mentions. He is particularly impressed with the AOAC "ruggedness test."

Before an Associate Referee (AR) sends the method out for collaborative study, he is expected to test for

The following are AOAC forensic science topics:

Alcohol in Blood
Biological Fluids
(Immunoelectrophoresis)
Blood*
Bomb Residues
Documents
Emission Spectrography
Fiber Analysis*
Fingerprints
Firearms*
Flammable Fluids
Gunshot Residues
Hair Examination
Inks
Lead and Its Stable Isotopes
Microscopic Methods
Microscopic Methods/Glass Products
Organic Mass Spectrometry
Paints (Pyrolysis GC Methods)
Paints (Spectrography)*
Safe Insulation
Soils (Geological Analysis)
Voiceprint Identification
X-Ray Diffraction of Physical Evidence*

* No Associate Referee

the effect of deviations from his proposed procedure on the end result. Then the method is sent out to at least six different labs for collaborative study. Each collaborator is sent a set of samples and an explicit procedure to follow. The AR evaluates results from all the labs and, if he is satisfied, recommends that AOAC adopt the method. It is reviewed by the General Referee and Subcommittee; if approved, it is adopted as an official AOAC method.

AOAC requires that the method and collaborative study be published in full detail in the open literature. In this way, users can check the study to ascertain the scope and limitations of the method before deciding whether to use it to solve their particular problem.

The availability of collaboratively studied methods may become increasingly important to the forensic community as physical evidence plays a larger role in courts of law. The lab tests used to present evidence, along with the testimony of experts, may come under closer scrutiny.

AOAC is interested in starting further discussions on forensic science projects. Contact Bruce Given at the above address or at 202/325-9449 if interested in any topics.



DEPARTMENT OF THE ARMY
UNITED STATES ARMY CRIMINAL INVESTIGATION COMMAND
UNITED STATES ARMY CRIMINAL INVESTIGATION LABORATORY—EUROPE
APO NEW YORK 09757
CHEMISTRY DIVISION

THE LAB

Located in Frankfurt, Germany, USACIL-Europe has a territory of coverage including the Azores, Europe, Africa, and the Middle East. A large area, but court, including travel, averages only 2.5% of work time. Although most work is performed for the military services, the lab also does work for other United States and foreign government agencies. The lab is organized into five divisions - Chemistry, Questioned Documents, Fingerprints, Firearms, Photography - and provides a full range of forensic analyses. Out of a total lab staff of 38 personnel, the Chemistry Division is by far the largest with 21. The Chemistry Division is loosely organized into three sections - Drugs, Serology, "Trace", and is large enough to allow personnel to perform in their areas of expertise, yet receive on-the-job training in other areas of interest.

THE POSITION

Personnel in the Chemistry Division are civilian career employees of the U.S. Government working for the Department of the Army. The GS-11 professional level requires a college degree meeting the course requirements of a chemistry major plus three years appropriate forensic laboratory experience. The 1978 annual salary range is \$18,258 - \$23,739 with liberal fringe and insurance benefits. All moving/storage costs are paid from the U.S. and return.

THE LOCATION

Frankfurt, Germany is the "Gateway to Europe", with the largest European Airport and nearly all of Europe within a day's drive by car. Although a large city with a high cost of living, due in part to numerous nearby military installations, Department of the Army civilians are provided a tax-free housing allowance in excess of \$5,000 per year.

OVERSEAS BENEFITS

Department of the Army civilians (DAC's) are free of German taxes and have full use of military facilities, which significantly reduces the cost of living below that of the U.S.. Examples include:

Commissaries (supermarkets)	Banks and Credit Unions
Post Exchanges (drug/department stores)	Travel agent & discount travel/tours
Class VI (liquor stores)	Movies
Garages and gas stations	Recreation Equipment & gymnasiums
Barbers	Handycraft & shop facilities
Hairdressers	Clubs and cafeterias
Tailors	Some hotels

DAC's are also able to purchase items in the British, French, and Canadian Post Exchanges located in Germany.

At the end of three years employment and willing to contract for two more, DAC's are eligible for an additional 30 days paid vacation plus paid travel expenses for the whole family to the home of record in the U.S.

FURTHER INFORMATION?

As many as three vacancies are expected in 1979 and recruitment normally starts one year in advance. If interested in employment or have other questions, write to the above address, ATTENTION: CHIEF CHEMIST.



DEPARTMENT OF LAW ENFORCEMENT
DIVISION OF SUPPORT SERVICES

JOHN G. LANDERS - DEPUTY DIRECTOR

January 9, 1978

Mr. Daryl Brender
Newsletter Editor
Eastern Washington State Lab
Public Safety Building, Room 100
Spokane, Washington 99201

Dear Mr. Brender:

Could you please see that the following employment opportunities are placed in your area forensic science association newsletter.

The Illinois Department of Law Enforcement, Bureau of Scientific Services, is seeking individuals with experience in the following areas:

- 1) Document Examinations - Salary range \$21,000 to \$25,000 a year. Starting salary is negotiable, depending on experience.
- 2) Latent Fingerprint Examinations - Position will be in Training and Applications Unit of the laboratory system. Salary range \$16,212 to \$21,888. Starting salary is negotiable, depending on experience.
- 3) Examination in either Trace, Chemistry, or Serology - Salary range \$12,660 to \$19,188. Starting salary is negotiable, depending on experience.

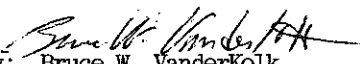
Submit resume to:

Bruce W. VanderKolk
Assistant Bureau Chief
Bureau of Scientific Services
107 Armory Building
Springfield, IL 62706

Your assistance will be greatly appreciated.

Very truly yours,

Tyrone C. Fahner
Director


By: Bruce W. VanderKolk
Bureau of Scientific Services

TCF:vc

107 ARMORY BUILDING * SPRINGFIELD, ILLINOIS * 62706

Criminal Investigation Lab
Suite 115 - Wilma Bldg.
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