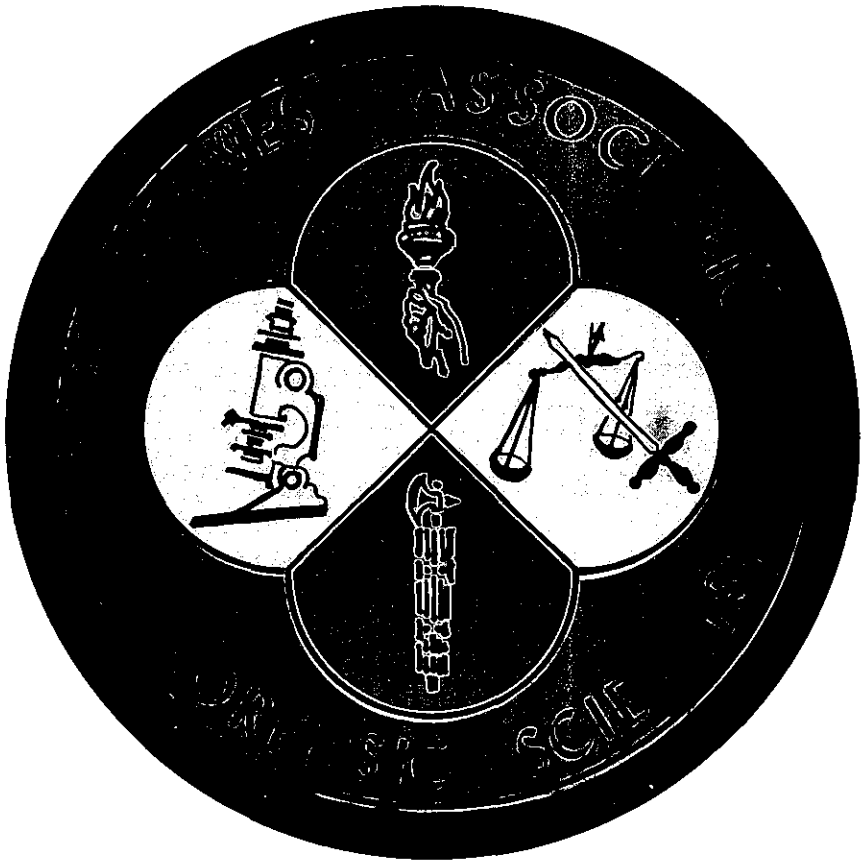
THE NEWSLETTER
of



JUNE 1983 VOL. 9 NO. 2

NORTHWEST ASSOCIATION OF FORENSIC SCIENTISTS

Executive Committee

President . . . . . Ken Konzak

Vice President . . . . . Don MacLaren

Secretary-Treasurer . . . . . Lionel Tucker

Executive Committee Member-at-Large . . . . . Carolyn Kirkwood
. . . . . Joe Rynearson

Past President . . . . . Brad Telyea

Committees

Ethics . . . . . Arnold Melnikoff

Membership . . . . . Robert Sager

Publication . . . . . George Matsuda

Historical . . . . . Floyd Whiting

Technical Advancement . . . . . Kathy Brown

Continuing Education . . . . . Beth Carpenter

Upcoming Meeting

Fall 1983

Joint Meeting with the

CANADIAN SOCIETY OF FORENSIC SCIENCE

Hotel Georgia
Vancouver, British Columbia
August 13 to 19, 1983

Contact: Jeff Kaughlin
RCMP Laboratory
5201 Heather St.
Vancouver V5Z 3L7
British Columbia, Canada

Screening Test for Heroin

Basil Travnikoff, Forensic Chemist
P.O. Box 287, Lodi, CA 95241 (209) 334-4338

This method describes a simple and very rapid semi-quantitative screening test for the detection of heroin in mixtures of acetylated opium or "brown heroin" as it is known, where colors produced by classical spot tests are often obscured due to impurities in the sample. It may also be used to estimate the percentage of heroin in the sample by color comparison.

THEORY

Heroin forms a coordination complex with cobaltous ions in dilute hydrochloric acid solution which may be extracted by ion-pair extraction with thiocyanate into chloroform. The heroin-cobaltous-thiocyanate complex gives the chloroform a characteristic color, the intensity of which is proportional to the amount of heroin in the sample.

REAGENTS

5% cobaltous chloride-6-hydrate plus 7% potassium thiocyanate in 0.5N hydrochloric acid. (To 100 mL of 0.5N HCl add 5 grams $CoCl_2 \cdot 6H_2O$ and 7 grams KSCN. Mix and allow to stand overnight)

Chloroform

EXPERIMENTAL

Approximately 10 mg of a sample suspected of containing heroin is placed into a small test tube. Add to the test tube about 1½ mL of the complexing reagent (above) and about 1½ mL of chloroform. Stopper and shake the test tube.

RESULTS AND DISCUSSION

If heroin is present, the lower chloroform layer will display the green color of the complex salt. A 10 mg sample in the test is not critical and need not be accurately weighed. A sample size of a "BB" is sufficient to detect a 4% heroin mixture as shown by a light green color in the chloroform. A 100% heroin sample will cause the chloroform to become very dark green.

The green color of the heroin complex is formed immediately upon shaking the reagents together with the sample in the test tube and appears to be stable indefinitely, which allows comparison with a laboratory color scale or other known samples of heroin. The complexing reagent is stable and its measurement is not critical.

A few other drugs (e.g., PCP) were found to interfere with this method, but no interferences have been observed while testing samples of acetylated opium. The sensitivity of the test (4%) can be increased by using a larger sample size.

The following material represents some of the papers and/or abstracts presented at SWAFS meetings since Spring 1981 that were available to the editors.

The following article is reprinted from the SWAFS Journal Jan. '83 with the permission of the author:

Albuquerque *May 1981*

NON-DESTRUCTIVE RUST REMOVAL FROM FERROUS OBJECTS

Cordell G. Brown
Colorado Bureau of Investigation

Oxidized ferrous objects are often received by crime laboratories for examination. When these examinations include microscopic comparisons such as those involving firearms cases it may be necessary to descale the object using a procedure that will do no further damage to the underlying base steel or alloy. If a bullet recovered from a crime scene is to be compared to a bullet fired through the barrel of a weapon that has been in water or damp soil it is logical to assume that the rust should be removed from the barrel prior to test-firing. If the rust is not removed the test-fired bullets will be noticeably changed by the scale build up.

When iron oxidizes, the chemical process results in expansion increases from seven to twelve times the original volume. This volume increase inside a gun barrel provides a considerably altered surface area for bullet contact as it is fired from the weapon.

Numerous industrial cleaning and descaling processes were analyzed in this study to determine which if any would be of value in the crime laboratory, (2,3,4,5) and second, rusty firearms were examined to determine which, if any, descaling process was necessary prior to firing and if so which procedure would provide satisfactory results.

SELECTION OF A DESCALING PROCESS

The seven basic industrial methods used for removing rust and scale are:

1. Abrasive Blasting
2. Tumbling
3. Brushing
4. Acid Pickling
5. Salt Bath Descaling
6. Alkaline Descaling
7. Acid Cleaning

The most important consideration in selecting one or more of these processes for use in the crime laboratory are:

1. The thickness of the rust or scale.
2. Allowable metal loss.
3. Available equipment.

4. Composition of the metal.
5. Shape of the object to be cleaned.

Occasionally combinations of two or more of the descaling processes can be used and still remain within these constraints.

Abrasive blasting and tumbling were not considered of value for laboratory use because: (a) specialized equipment would not be readily available, (b) the configuration and size of evidence items such as the inside of a gun barrel would be a major limiting factor, and (c) further surface damage to the base metal could very readily take place.

The salt bath descaling process was not considered since specialized equipment is required to keep a solution temperature of approximately 700°F.

Acid pickling was not considered a suitable method for laboratory use since: (a) the acid temperatures of 130°F require special safety precautions, (b) careful monitoring must be maintained to avoid removal of the base metal, and (c) this procedure is most useful where the depth of rust is generally uniform over all exposed surfaces of the object.

The three remaining processes were evaluated and will be reported in this paper.

Brushing is the procedure commonly used in many crime laboratories for descaling and thus became the standard for comparison to the remaining methods. The brushing method used consisted of: (a) soaking the barrel in penetrating oil for several hours, followed by (b) brushing with brass and plastic bristled brushes, and then (c) cleaning with oiled and dry patches.

A microscopic comparison of bullets test-fired before and after the gun barrel had been rusted and descaled disclosed that no identification was possible. The surface of the bullets recovered after descaling were highly abraded with entire areas of some land and groove marks totally obliterated.

EXPERIMENTAL PROCEDURES AND RESULTS

Acid cleaning, both by dipping and using electrolytic procedures were examined using hydrochloric, sulfuric, phosphoric and citric acids. The solutions were maintained at room temperature. The electrolytic descaling was conducted using a 12 volt automobile battery or a D.C. power source maintained at three to seven volts and 200 miliamps. The firearm served as the cathode and pieces of galvanized iron were used as the anode.

The same conditions were maintained for the alkaline descaling and electrolytic descaling. Solutions of 60% sodium hydroxide and the proprietary solutions of Liquid Drano and Liquid Plummer were used. Sodium cyanide was also added to these solutions to avoid saturation of the solution with free iron ions.

Three Burgo and one Arminius revolvers, model HW38, caliber .38 Special were selected for this project. The weapons were cleaned and test-fired for bullet and cartridge case recovery. The revolvers were then completely degreased by soaking in organic solvents and boiling in concentrated sodium hydroxide solution. They were rusted in a low temperature oven chamber at 100% humidity for several days until a thick scale developed on all ferrous surfaces.

During this rusting period numerous rusty and new degreased nails were subjected to mechanical, acid and alkaline descaling techniques for evaluation.

Mechanical brushing of the rusty nails removed the outer soft scale formation, but tended to only polish the more firmly adhering surface deposits. The use of a knife blade did not totally remove these deposits and in addition resulted in damage to the base metal. These results indicated that light brushing to remove loose scale prior to chemical treatment will help in reducing the saturation of the solution with free iron ions.

A microscopic examination of the new and rusted nails after immersion and electroylysis in inorganic acids resulted in minor to severe etching and removal of the base unrusted metal. Sulfuric, hydrochloric and phosphoric acids were tested in dilute and concentrated forms for varying lenghts of time. Various organic chemical compounds were also tested as inhibitors to prevent or reduce the attack on the base metal. In the metallurgical sciences and industry inhibitors are identified as natural or synthetic organic compounds with either a nitrogen base or complex sulfur compounds that form a weak chemical bond with the base metal as it becomes exposed. This bonding either slows or prevents attack upon the newly exposed base metal surface. This study found that even in the presence of organic inhibitors solutions of all three inorganic acids produced microscopically visible surface etching on new nails suspended in the liquids.

The use of stannous chloride as a restrainer (inhibitor) was also studied. According to Evans (1) tin salts retard the attack of acids on steel by precipitating the hydrogen sulfide which can be fomed from sulfide present in the steel and which act as an anodic stimulator.

Nails and ferrous revolver parts were tested with suitable results. A solution of 0.05% $SnCl_2 \cdot 2H_2O$ in 20% sulfuric acid (V/V) at room temperature resulted in total rust removal from inside and outside the barrel. The revolver was attached to the cathode and a wire anode was suspended inside the barrel. The total reaction time was five minutes with the D.C. power source set at 3 volts and 200 milliamps.

The test-fired bullets recovered after descaling showed less microscopic damage than any of the bullets from the other descaled weapons in which brushing or alkaline descaling procedures were used. A microscopic comparison of the bullets test-fired before and after rusting disclosed very few common stria. Further testing of this

procedure using varing concentrations of acids, stannous chloride and the addition of organic inhibitors will be studied in the future.

Special precautions should be taken when using this process on aluminum alloy frames. Contact of the frame and the acid results in an immediate violent reaction, resulting in extensive corrosion of the alloy.

Tests conducted with citric acid did not disclose the presence of any microscopic surface etching, however, no appreciable rust scale was removed from oxidized surfaces after six hours of electrolysis. The new test nail did, however, develop a deep permanent surface bluing.

The final method examined was electrolytic alkaline descaling. This procedure is slower, but no loss of base metal takes place. With this method chemical action stops when all rust scale is removed. This method is therefore used in those applications where loss of metal or surface etching cannot be tolerated.

A number of proprietary compounds are avialable commercially, however, more readily accessable standard laboratory and household compounds were used in the present study. Future work in this area will evaluate the relative merits of industrial compounds.

Descaling activity by immersion and by electrolysis using 60% sodium hydroxide both with and without sodium cyanide were extremely slow. Proprietary compounds use chelating agents, detergents and surfactants that are intended to speed up this process.

A suitable chemical mixture containing many of these materials was found to be readily available as Liquid Drano or Liquid Plummer. These products consist of sodium hydroxide, sodium hypochlorite, inhibitors and surfactants.

Drano and Liquid Plummer were used in the electrolytic process with and without the addition of sodium cyanide. The ferrocyanide complex formed with the iron ion results in a more rapid reaction and avoids the saturation of the solution with free iron ions. An equilibrium state reached in the absence of the cyanide would result in a slow down or halt of the reaction. It is questionable, however, whether the inconvenience and dangers involved in the use of cyanide can be justified in such a small and limited operation as would be encountered in the crime laboratory.

A majority of the scale removed from firearms accumulates on the anode as ferric hydroxide which can be removed by scrubbing the electrode under running water.

The mild oxidizing reaction provided by the sodium hypochlorite in the strong alkaline sodium hydroxide solution along with the activity of the surfactants present considerably speed up the cleaning action when compared to sodium hydroxide alone. The barrel of a revolver was descaled in six hours in Drano with the D.C. power source set

at 3 volts and 200 milliamps. The anode consisted of a 12 guage galvanized iron wire suspended the entire length of the barrel. The wire was removed once each hour to remove accumulated ferric hydroxide.

Test-fired bullets recovered after descaling by this method could not be matched to bullets fired prior to rusting, however, future sutdies will involve a more complete descaling technique. Very minor rust deposits remained in the barrel at the time of test-firing which produced very obvious detrimental results. These deposits remained at the muzzle and breech ends of the barrel where the plastic bushing suspending the anode had been in contact with the inside walls.

SUMMARY AND CONCLUSION

Relatively new imported revolvers were test-fired, degreased and extensively rusted. The rust was partially or totally removed by three methods; (a) penetrating oil and brushing, (b) acid immersion with electrolysis and (c) alkaline immersion with electrolysis. Test-fired bullets recovered after descaling by the two electrolysis techniques were much more suitable for comparison and identification purposes than those recovered from the weapon cleaned by brushing.

REFERENCES

1. Evans, Ulic R., The Corrosion and Oxidation of Metals: Scientific Principles and Practical Applications, Edward Arnold, London, pp. 404-413, 561-568.
2. Lyman, Taylor, Editor, Metal Handbook, 8th Ed., Vol. 2, American Society for Metals, Metals Park, Ohio, pp. 310-321, 330-331, 340-354.
3. Petty, E.R., Physical Metallurgy of Engineering Materials, American Elsevier, 1968, p. 227.
4. Pourbaix, Mercel, Lectures on Electrochemical Corrosion, Plenum Press, New York, 1973.
5. Uhlig, Herbert, Corrosion Handbook, John Wiley and Sons, New York, pp. 1078-1083.

ACKNOWLEDGEMENTS

The firearms used in this study were provided by Captain Robert Nicoletti of the Denver Police Department. The assistance of Captain Nicoletti and Agent Claude Cook of the Colorado Bureau of Investigation for providing their knowledge of firearms processing techniques and Dr. Richard Lehmann, Agent in Charge of the Colorado Bureau of Investigation laboratory in Denver for advice relating to the chemical reactions involved in the rusting and descaling procedures are gratefully acknowledged. A special thanks to Michael A. Thurston of the Colorado Fuel and Iron Corporation for his assistance and explanation of industrial descaling processes.

PERSISTENCE OF SEMINAL FLUID CONSTITUENTS

Dr. I. C. Stone
Southwest Institute of Forensic Sciences

(Dr. Stone indicated that he has noted some discrepancy between testimony of forensic scientists and members of the medical profession when it comes to the persistance of seminal constituents. The tables below reflect the experience of the Southwest Institute of Forensic Sciences and studies by other investigators. We feel that this material will be of value to those who testify in this area. — Ed.)

REFERENCES

1. J.C. Rupp, Sperm survival and prostatic acid phosphatase activity in victims of sexual assault. J. Forensic Sci., 14 (1969) 177-183.
2. M.R. Soules, A.A. Pollard, K.M. Brown and M. Verma, The Forensic Laboratory Evaluation of Evidence in Alleged Rape., Am. J. Obstet. Gynecol., 130 (1978) 142-147.
3. N. Sharpe, The Significance of Spermatozoa in Victims of Sexual Offences., Can. Med. Assoc. J., 89 (1963) 513-514.
4. A. Davies and E. Wilson, The Persistence of Seminal Constituents in the Human Vagina, Forensic Sci., 3 (1974) 45-55.
5. V. Eungprabhanth, Finding of the Spermatozoa in the Vagina Related to Elapsed Time of Coitus. Z. Rechtsmed., 74 (1974) 301-304.
6. A.I. Morrison, Persistence of Spermatozoa in the Vagina and Cervix. Br. J. Vener. Dis., 48 (1972) 141-143.
7. D.R. Tradway, D.S. Fordnay Settlage, R.M. Nakamura, M. Motoshima, C.U. Umezaki and D.R. Mishell, Significance of Timing for the Postcoital Evaluation of Cervical Mucus. Am. J. Obstet. Cynecol., 121 (1975) 387-393.
8. I.F. Stein and M.R. Cohen, Sperm Survival at Estimated Ovulation Time: Prognostic Significance. Fertil. Steril, 1 (1950) 169-175.
9. R. Nicholson, Vitality of Spermatozoa in the Endocervical canal. Fertil. Steril., 16 (1965) 758-764.
10. E.M. Silverman and A.G. Silverman, Persistence of Spermatozoa in the Lower Genital Tracts of Women, J. Am. Med. Assoc., 240 (1978) 1875-1877.
11. E.M. Silverman, Persistence of Spermatozoa in the Lower Genital Tracts of Women. Am. J. Clin. Pathol., 68 (1977) 107.
12. G.M. Willott & J.E. Allard, Their Persistence After Sexual Intercourse. Forensic Sci. Int., 19 (1982) 135-154.
13. R.L. Brown & R.J. Thompson, Post-coital Sperm Longevity as Related to Sexual Assault. Presented at Amer. Col. of Obstet. & Gynecol. Natl. Mtg., Dallas, Texas, May 1982.

ACID PHOSPHATASE

NORMAL LEVELS (VAGINA)	:	30 - 40 IU/L
INDICATIVE OF SEMINAL FLUID	:	100 IU/L
LEVEL OF ACP DETERMINED AT 2 - 4 HOURS AFTER INTERCOURSE:		2500 - 3000 IU/L
NECESSARY FOR TYPING	:	1250 IU/L

PERSISTENCE OF SPERMATOZOA

TOTAL FEMALE SEXUAL ASSAULT CASES, JULY 1982 THROUGH JUNE 1983	:	1,029
SPERMATOZOA OBSERVED BY PHYSICIAN	:	472 (46%)
SPERMATOZOA AND/OR SEMINAL ACID PHOSPHATASE	:	669 (65%)

PERSISTENCE OF SEMINAL CONSTITUENTS

ACID PHOSPHATASE (SEMINAL)

RETURNS TO NORMAL LEVEL (100 IU/L): 18 - 24 HOURS AFTER INTERCOURSE

SPERMATOZOA:

MOTILE :	4 - 6 HOURS (10% TO A MAXIMUM OF 12 HOURS)	VAGINAL POOL
NON-MOTILE:	24 HOURS	VAGINAL POOL
	5 - 6 DAYS	CERVICAL MUCOUS

PREVIOUS RECORDS OF THE PERSISTENCE OF SPERMATOZOA IN THE VAGINA

AUTHOR	NO. EXAMINED	SAMPLES EXAMINED	DONORS	LONGEST TIME AFTER SEXUAL INTERCOURSE SPERMATOZOA FOUND
Rupp (1969)	84	Vaginal aspirates	Sexual assault victims	14 hours
Soules, Pollard Brown and Verma (1978)	15	Vaginal fluid	Sexually active couples	50% positive after 72 hours
Sharpe (1963)		Vagina		3 to 4 days
Davies and Wilson (1974)	730	Vaginal swabs	Laboratory staff	6 days
Eungprabhanth (1974)	174	Vaginal smears	Rape victims	6 days
	200	vaginal smears	Family planning patients	7 days (assumed from data analysis)
Morrison (1972)	104	Vaginal smears	Women attending clinic	9 days
		Cervical smears	Women attending clinic	12 days
Tredway et. al. (1975)		Cervical mucus	Artifically inseminated	48 hours
Stein and Cohen (1950)	25	Cervical mucus	Infertile couples	72 hours
Nicholson (1965)	85	Endo-cervical canal	Patients	8 days
Silverman and Silverman (1978)	675	Cervico-vaginal scrapings	Volunteer donors	Rarely after 10th day
Silverman (1977)	697	Cervico-vaginal scrapings	Volunteer donors	19 days (possibly correct)
Willott & Allard (1982)	2410	Internal vaginal swabs	Sexual Assault victims	5 days
Brown (1982)	50	Vaginal aspirate	Volunteer donors	14 hours (vagina) 26 hours (cervical mucous)

DEPARTMENT OF LAW ENFORCEMENT
DIVISION OF SUPPORT SERVICES
SAM W. NOLEN - DEPUTY DIRECTOR

The Midwestern Association of Forensic Scientists is pleased to announce that their fall meeting will be held November 2 through 5, 1983 in Peoria, Illinois.

ACCOMMODATIONS

Peoria-Brandywine Holiday Inn
4400 North Brandywine Drive
Peoria, Illinois 61614
(309) 692-9000

Single: $52
Double: $55

This Holidome Recreation Center is 10 miles from the airport, provides a free shuttle to the Northwoods Mall, and is 2 miles from downtown Peoria.

SCHEDULE

Nov. 2, 1983	Laser and Instrument Evaluation Workshop
Nov. 3 & 4, 1983	Presentation of papers and business meeting
Nov. 5, 1983	Possible additional papers and/or workshop

REGISTRATION

$30 (Payable to MAFS) in advance or at the door; send advance registrations to:

Peg Riecks
610 Armory Building
Springfield, Illinois 62706

PAPERS/FURTHER INFORMATION

Contact: Susan Johns
1810 South Main Street
Morton, Illinois 61550

Abstracts should be received by September 1, 1983

MIDWESTERN ASSOCIATION OF FORENSIC SCIENTISTS, INC.
"A PROFESSIONAL, SCIENTIFIC AND EDUCATIONAL ORGANIZATION"

TAX IDENTIFICATION
NUMBER 23-7132860

April 12, 1983

TO WHOM IT MAY CONCERN:

As toxicology coordinator for the Midwest Association of Forensic Scientists, I am soliciting your participation in the upcoming meeting in Peoria, Illinois. This meeting will be held November 2 thru November 5, 1983.

It has been my experience, with some exceptions, that toxicologists primarily communicate and work with other toxicologists. I would like to reaffirm that toxicology is an important part of forensic science, which all forensic scientists should be aware of. With this in mind, I would ask that you do everything in your power to participate in the MAFS as a toxicologist.

The meeting in November has space available for poster presentations, participation by a toxicologist in a general or plenry session, presentations of regular papers, and for workshops by toxicologists. In particular, we would welcome round table discussions or workshops on instrument techniques such as LC or GC and on toxicological subjects such as drug metabolites or unusual cases.

As a beginning, I will moderate a panel discussion in Peoria with regard to statewide Breath Alcohol Testing Programs. This discussion will cover instrument selection, instrument instruction, administrative rules, current techniques and toxicological interpretation of alcohol findings. Participants should notify me and bring pertinent information which I will compile to be published by MAFS. Please notify me by September 1, 1983 if you plan to join us.

I hope you can find the time in your busy schedule to participate in this meeting, and meetings in the future, so that toxicology can be an important part of the forensic science considerations of MAFS.

Respectfully,

MICHAEL L. REHBERG, BS., MS., DABFT
DCI Criminalistics Laboratory
Wallace Building
Des Moines, Iowa 50319
515/281-3666

MLR:pmg

Scientific Sleuthing Newsletter

Science in Criminal Law

JANUARY 1983 VOLUME 7, No. 1

Formerly
SCIENCE IN CRIMINAL LAW
NEWSLETTER

PUBLISHERS
The Mid-Atlantic Association of Forensic Scientists – Dr. Edward Sykes Franzosa, 2812 Jermantown Road, Oakton, VA 22124

SUBSCRIPTIONS
Subscription rates are:
For individuals: $10 for one year; $18 for two years and $25 for three years.
For institutions: $15 per year.
For members of supporting groups: $7 per year.
To subscribe send your name, address, name of employer, daytime phone number (with area code) and check made payable to "MAAFS" to:
Scientific Sleuthing Newsletter
Box 196
McLean, Virginia 22101

To Err Is Human, Infallibility is Divine

by Professor James E. Starrs, Co-Editor

Misidentification Fingerprint Results in Reversal of Minnesota First-Degree Murder Conviction

PART I

The reliability of fingerprints to identify one individual from another has become given in forensic science, but to engage in the act of identifying is "inerad[illegible]le mark," as Mark Twain described it, are not graced with the same quality of infallibility. A recent decision from the Minnesota Supreme Court disturbingly attests to the fact that although fingerprints do not lie, the persons who claim to be able to make an identification of a fingerprint can err.

THE CRIME:

Elisabeth Congdon, an elderly Duluth heiress, and her nurse were found dead in Miss Congdon's Duluth mansion at about 7 A.M. on June 27, 1977. Miss Congdon was determined to have died of suffocation at about 2 A.M. of the same day. Her nurse, Velma Pietila, was found dead of skull fracture and loss of blood. Strands of hair were clutched in her hands, a broken candlestick was located near the body and a nylon stocking was affixed to her left wrist. Miss Congdon was shown to have suffered ante-mortem bruises and to have been the victim of post-mortem pilfering of a watch and a ring from her hand.

THE INVESTIGATION:

Upon investigating the crime scene, a basement window was thought by the police to be the point of entry since a pane of glass in it was broken and what appeared to be a foot impression was found on a sofa underneath the window. A dusting of the mansion for fingerprints failed to discover any that were usuable except for a latent print on the candlestick which was decided not to have been placed there by the defendant, the victim's son-in-law.

However, hairs found near the nurse's body, it was said, "could have" come from the son-in-law. Unfortunately (for the prosecution) all relevant parties, that is the defendant and the two victims, were found to have blood type O, but blood on a pillowcase near Miss Congdon's head had "one of the same enzyme types" as the defendant.

Drunk Driving Drugs Constitutional Issues

Glass Fingerprints

Bitemarks Documents

Serology Toxicology

Pathology

ANNOUNCEMENT and SUBSCRIPTION FORM

With Volume 7, the beginning of the seventh year of its publication, the *Scientific Sleuthing Newsletter* will be sponsered and published by the Mid-Atlantic Association of Forensic Scientists. The coverage and the editorship of the newsletter will remain the same. The style and format will undergo certain changes in order to make the Newsletter more readable and more likely to be a permanent fixture in your library of forensic science materials. Entries in the Newsletter will be a given a distinctive and consecutive numbering designation so as to enhance retrieval when desired. We will continue to provide copies of items summarized upon request as a service to our readers. A cumulative topic index of materials included over the past six years will be available at a minimal cost. A paperbound volume of all prior issues through Volume 6 is in preparation. If interested in further details, check the appropriate box on the subscription order form below.

Annual subscriptions are available as follows:
Individuals: $10 for one year; $18 for two years; and $25 for three years.
For Institutions and Libraries: $15 per year.
For members of supporting groups and associations: $7 per year.

.....

SUBSCRIPTION FORM

Please send the *Scientific Sleuthing Newsletter* to:

Name: .....Employer:.....
Address: .....
.....Daytime
.....phone:.....
Zip: .....(please include area code)

My check for $....., made payable to "MAAFS" is enclosed.
Individual: ( ) $10/one year; ( ) $18/two years; ( ) $25/three years.
Institution or Library: ( ) $15/year. Supporting group member: ( ) $7/year.

[ ] Yes, please send details on obtaining the paperbound volume of back issues (vols 1-6) and the cumulative topic index.

SEND THIS FORM TO:

Scientific Sleuthing Newsletter
Box 196
McLean, Virginia 22101

Your Association will be distributing a roster of the membership for the calendar year 1984 late this fall. To be included correctly, please fill out the form below, fold on the dotted lines, affix postage stamp and mail or bring form to the Vancouver meeting.

. . . . . Fold Here . . . . . .

Print

Name _____

Title _____

Agency _____

Address _____

_____

Phone _____

Area of expertise _____

Date _____

. . . . . Fold Here . . . . . .

"THE MEANING OF THE LOGO"

The color scheme is in three parts: Gold meaning Science, Blue meaning Truth and Purple meaning Justice.

The four pictures of equal balance are The Scales of Justice, The Torch of Knowledge, The Microscope denoting Criminalistics or Forensic Science and The Fasces, the Symbol of Authority.

The Association's name is part of the Logo and the pharmaceutical symbol ℈ denotes the association as having scruples.

The Editor

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.

Submit all contributions to the Newsletter Editor:

George K. Matsuda, Lieutenant
Oregon State Police Crime Laboratory
222 SW Pine Street, Fifth Floor
Portland, OR 97204

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