Crime Scene

Spring / Summer 1997 Volume 23, Issue 2-3

President's Message

This will be my last message to the members as your President, and I would like this opportunity to thank the Board of Directors and Committee Chairs in assisting me in my year in office. It has been a great honor representing our association.

The last decades of this millenium have witnessed the Forensic Sciences advance to levels only imagined by our early founders. With the advances in technology, Forensic Science became more legitimate as a Science, and not the "dark magic" that our detractors, and some clients, thought that we employed in examinations. As physical evidence becomes of greater importance in investigations and trials, juries and judges are becoming more aware of the power of Forensic Science to be an objective and impartial discriminator of evidentiary matters.

But as we all know, our Science is more than the instruments, technology, and protocols that we employ. The engine of our profession is primarily through the practitioners who use common sense, insight, experience, training, scientific method, and specialized knowlege. We put examination results into an understandable form and proper perspective for the triers of fact, and also among peers.

However, for all of the increase in technology, where have we seen the most interest by our detractors? It has become the Examiner and the percieved agenda of his or her Agency! I see this a forwarning of pressures to come for our Science and practitioners. But I do not see this necessarily as an evil. Through self introspection, training, adherence to validated protocols derived by good scientific method, our association and Science will be stronger and healthier for it.

Certainly, some of our detractors have personal and political agendas that seem to be the impetus to their "holy war", and because of the ethics of the current "Pop Media" they seem to be the loudest voice on the airwaves. These efforts are short lived, no matter how personally offensive we feel that they are. But we also have to recognize that they are being heard by the same people that must hear us someday, and we must consider reasonable scientific responses to their issues. These responses will be from well reasoned answers to questions from your witness stand, from research reported in peer review journals and Association meetings, and from personal profesional enrichment through training activities.

We as an Association must also strive to keep our agencies and laboratories well aware of the dangers of any percieved or real bias that might creep into our examinations, or evaluations. This may take different forms, such as from a co-worker and peer, or it may be a "cultural" bias in the lab that you work in. It is absolutely necessary to recognize and remove this bias whenever it is seen. This can be accomplished by giving attention to our co-workers' casework during peer review, giving factual, objective information to prosecutors and detectives, and personal sensitivity to recognize bias in you own work. Acting on these circumstances will protect yourself, your laboratory, and our profession from any appearance of unprofessional conduct or the release of questionable, unreliable examination results.

Our Association must keep our ideals on the highest moral plane, and in so doing, mature into the respected, and noble Science that our citizens have learned to respect. I am confident that this will come to pass, and am eager to support our Association in the future.

Robert M. Thompson

Spring 1998 Meeting in Portland

The NWAFS Meeting will be held from May 4-8, 1997 at the The Benson Hotel in downtown Portland, Oregon. Workshops will be held from Monday through Wednesday (arson workshop will start on Sunday). Technical sessions will be held on Thursday and Friday. A wine and cheese reception will be held in the vendor area on Wednesday evening. ABC Certification examinations will be offer on Monday and Tuesday evenings. For information on the technical program contact Beth Carpenter, for information on vendors and facilities contact Deborah Newville or for information on the workshops contact Tom Barnes, at (503)-229-5017.

Tentatively schedules workshops include:

Pyrolysis GC (CDS)
Glass Analysis / Trace Statistics
Advance Arson (4 day - NFSTC class)
Solid Phase Extractions (United Technologies)
GC Maintenance
Underwater Death Investigations (RCMP)
Aspects in Forensic Anthropology
Digital Imaging
LIMS (AGCS)
Time Management
Population Genetics (Sensabaugh)
DNA User Group Meeting
STRs

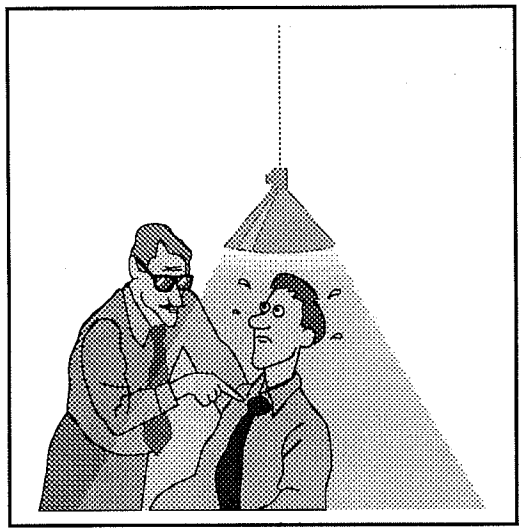
Upcoming NWAFS Meeting Locations

Spring 1998 Portland, OR

Fall 1998 Sun Valley, ID

Spring 1999 Anchorage, AK

Don't miss an upcoming meeting! Make plans today to attend a workshop, teach a workshop, present a paper, or just hang with the forensic crowd!



NWAFS OFFICERS for 1996–97

Executive Committee

President	Robert M. Thompson, ATF Laboratory, Walnut Creek, CA
Vice-President	Terry McAdam, WSP Crime Lab - Seattle, WA
Member-at-Large	Arnold Melnikoff, WSP Crime Lab-Spokane, WA
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Membership	Roger Ely, DEA Western Laboratory, San Francisco, CA
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Internet Basics.
IV. Selecting an Internet Service Provider or Online Service

Review

In the past three articles, we've looked at such things as the history and background of the Internet; the hardware and software requirements you'll need to get online; and last time we looked at two free email services. Email is, by far, the most popular and productive tool offered by online services.

But, what you really want to do is get online and explore the World-Wide Web, a hypertext linked resource covering just about any topic you can think of ... and plenty you've never thought of! To do this, you need to have access to an Internet Service Provider (ISP) or an Online Service Provider (OSP).

Internet Service Providers and Online Services

An ISP is a company that provides, usually on a subscription basis, access to their "Internet on-ramp." If you consider the popular analogy of the Internet being a super-highway, access to the super-highway is very expensive. Unless you have a company or a business where having a direct connection or domain on the Internet is warranted, it is cost prohibitive (up to $500 per month) for a typical user to have direct access to the Internet.

An ISP operates an "on-ramp" to the Internet, and charges a "toll" in the form of monthly subscriptions to the user's accessing the "on-ramp." These "on-ramps" are known as "gateways."

An ISP usually operates only a gateway; thus, a subscriber to this service can dial up the ISP's access phone number and log-on directly to the Internet to access email, the World-Wide Web, and news groups. Services like these are AT&T Worldnet, Earthlink, Netcom, Sprynet, CRL, and others. They are simply gateways to the Internet.

Another similar type of service is called an Online Service Provider (OSP). OSPs provide content other than just that which is available on the Internet. These services operate as self-contained information services, much like the computer bulletin boards (BBSs) of the past. They provide "chat" rooms for users to communicate in real-time; forums for major software and hardware manufacturers, connections to news feeds; access to major airline services; and a gateway to the Internet. Services like these include America Online (AOL), Compuserve, and Microsoft Network (MSN). If you log on to AOL and go the Aldus area to learn about import filters for PageMaker 6.5 for an old word processor, you are not on the Internet ... you are still within the confines of AOL's computer service.

What Do You Want To Do?

One of the slogans used by Microsoft's ads these days is "Where do you want to go today?" The question is meant to represent the enormous possibilities of information retrieval available on the Internet today, mostly in the form of World-Wide Web pages.

To select a commercial service provider, you should consider the following points:

1. *What exactly do you want to do on the Internet?* If it is simply to keep in touch with a colleague, friend or family member via email, you may not really need to spend the money on a commercial service. Rather, you can be just as productive using a free email service like JUNO. However, if you want to access the World-Wide Web and the news groups, you will need a full service provider.
2. *Do you want to access only the World-Wide Web and news groups?* The level of service provided by an ISP would be of interest to you. If you are not interested in services like chat rooms, forums, and other commercial services, you would be satisfied with a simple gateway ISP. But, if you think these areas might be of interest to you, then you want to consider an OSP like AOL, Compuserve, or MSN.
3. *Does the ISP charge a flat rate or by the hour?* If I were writing this article a year ago, things would be very different when we got to the point of talking about prices of subscriptions. Just about all the basic service providers now have a flat rate ranging from $19.95 to $24.95 per month for access. This allows the user unlimited access to the provider's service and the Internet gateway. In the "old days," you paid a flat fee per month and got around 10 hours of access per month .. and anything over the 10 hours was billed at an hourly rate. Depending on your service, the amount of time you spent online, and whether your ISP's phone number was a local or toll call could make going online very expensive.

Table 1. Internet Service Providers Comparison Table

	AT&T Worldnet Service	Earthlink Network	Netcom	Sprynet
World-Wide Web address	www.att.com/worldnet	www.earthlink.net	www.netcom.com	www.sprynet.com
US POPs	215	302	230	460
Basic access fee/ month	$4.95	$19.95	$19.95	$4.95
hours included	3	unlimited	unlimited	3
additional hours	$2.50	none	none	$1.95
Unlimited access / month	$24.95	$19.95	$19.95	$19.95
Web page space (size)	none	2 MB	1 MB	5 MB
Email addresses / account	1	1	1	1
User specified email address	yes	yes	yes	yes
Number of news groups provided	20,000	21,373	17,000	15,000
Technical support phone	800-400-1447	800-395-8410	408/983-5970	206-957-8998

4. *Do you travel and plan to access your email on the road?* Many communities have local ISPs who provide excellent Internet access for a reasonable fee. However, if you go on the road often (as I do) and your email is an important part of your job and daily existence (guilty, again!), you may have to place a long distance call back to your ISP. Many of the big services (AOL, Compuserve, MSN, CRL, Netcom, JUNO, etc.) have what are known as *points of presence* (POPs). POPs are local phone numbers in many different communities and areas that allow you to make a local call to access your email and the Internet. AOL, for example, has a tremendous number of POPs — over 550 nation-wide, including one in Missoula that Lisa Caughlin used at the Spring meeting to demonstrate the NWAFS web page! AOL also has an 800-number if you aren't in an area with an AOL POP. It isn't truly a free 800-number, AOL bills your account about $2 per hour of access using the 800-number.
5. *Will you want to create a World-Wide Web page of your own?* If the answer is "Maybe" or "Yes," then you should consider a service that provides subscribers with hard-disk storage space. This space will be used to hold the HyperText Markup Language (HTML) files and graphics that will define your web page. This extra space may be included in your basic subscription, or may cost a couple of dollars extra. Nearly all services charge you a couple of dollars more a megabyte if you exceed your allotted storage space.

Online Service Providers

Remember, OSPs are more than just gateways to the Internet. They actually provide some content and features to their subscribers that is unique to them. The service also provides a gateway to the Internet for subscribers. They also usually provide proprietary software which allows the user to access the service's content and the Internet, though most of the major services' Internet browsing software is inadequate when compared to Netscape, Internet Explorer, or Mosaic. Below are some OSPs recently reviewed and rated in PC Magazine (November 1996):

America Online

Selected "Editor's Choice" for the second year in a row, AOL is the neophyte user's dream. AOL's software is easy to install, richly graphic and simple to use. Current versions of AOL's software, version 3.0, allows the user to use Netscape or Internet Explorer for browsing the World-Wide Web.

Last year, AOL restructured its subscription scheme offering unlimited access to their service and the Internet for only $19.95 per month. In addition, there was a lesser level of service offered that gives the user 5 hours a month of access for only $9.95. If you exceed your 5 hours, you are billed $2.95 per hour. AOL is definitely family oriented as you can set-up 5 different "screen" names or accounts on a master account. This would allow everyone in a family of 5 to have their own, private email access. In addition, each screen name has access up to 2 MB of web page storage — for a total of 10 MB.

Perhaps one of the strengths of the AOL software, and a reasonable justification for the limited access account, is the "flash session" feature. With "flash session," you can dial up AOL and it will download your email messages for you. In addition, the "flash session" software allows you to read and compose your email off-line so you don't eat into those 5 hours of time you are paying for. The flash session is ideal if you are on the road and need to call long distance to access your AOL account. The flash session software must be downloaded from AOL, though.

AOL's email software allows the user to send a binary file attached to an email address. For example, Lisa Caughlin recently had a question about the mass spectrum of a compound she was having trouble identifying. She took the mass spectroscopy data file, attached it to an email note, and sent it to me. I retrieved the message, saved the datafile, and was able to look at her raw data on my GC/MS in my lab and search our databases. Unfortunately, we still couldn't identify it ... but this still shows the power of being able to attach datafiles to email. Unfortunately, AOL only allows you to attach one file with a message. To send multiple files, you have to either send multiple messages (a pain) or use a utility like PKZIP to compress all of the files into one ZIPped file.

To get a really taste of the flavor of online services and the Internet, AOL is probably your best choice. Unfortunately, AOL has been getting some bad press recently when their computers have gone down for extended periods leaving their users stranded, and with complaints from users not being able to log-on to the AOL system at all due to heavy use and traffic. The problem got so bad this past winter, a couple of states sued AOL for breach of contract!

If you want to try AOL and you haven't been on the face of the earth for long (just about everyone and anyone has received a disk egging them to join ... I had TWO AOL setups on my new computer when I bought it!), you can contact them and I'm sure they will be glad to rush you out a free disk. AOL has over 550 POPs in the US making it highly likely access is just a local phone call away.

American Online Inc.
Vienna, VA
800-827-6364

Compuserve

Compuserve is probably one of the oldest, continuously operating OSPs in the US. I can remember when I bought my first computer, a KayPro 4 with a 300 baud modem (did some real bit-pushing with that dinosaur!), there were two online services available at the time — Compuserve and the Source.

One of the old drawbacks of Compuserve was how the service determined your user ID — the screen name by which people would recognize you. Compuserve, up until earlier this year, assigned you a multi-digit screen name like 74544,0123. This, though, was not acceptable form for the Internet, so the comma gets replaced with a period: 74544.0123. The problem is, it is difficult to recognize who this person is. Fortunately, Compuserve recently started letting their subscribers determine their own screen names.

Compuserve, like AOL, comes with proprietary software that dials in to Compuserve, sends and receives email, provides access to forum or discussion areas and other content specific areas. In addition, Compuserve includes Spry's Mosaic web browsing software for viewing World-Wide Web pages.

Compuserve's Internet gateway allow the user to use the FTP and Telnet functions of the Internet, and supports the Usenet news groups. Unfortunately, Compuserve's email program will not allow you to attach any type of file for transmission outside of Compuserve via the Internet. A user can attach a file and email it to another Compuserve user.

The Compuserve software is free for the asking, and the first month's fee is usually waived. There is a monthly charge of $9.95 for 5 hours of access; any additional hours are $2.95 per hour. Compuserve has over 410 POPs in the US, making it almost certain a local phone call will allow you access. For information and software, contact:

Compuserve Inc.
Columbus, OH
800-524-3388

The Microsoft Network

The Microsoft Network (MSN) was born about the time Microsoft released its Windows 95 (Win95) software. In a growing market of online services, Microsoft discovered it was about to be left in the dust in a growing consumer market ... something Microsoft doesn't like. If there is a buck in computers or software to be made, you can just about bet Microsoft will somehow be present either in the forefront or behind the scenes.

Win95 took Microsoft's Windows environment to a higher, more intelligent level with its "Plug and Play" technology. One of the features offered in Win95 was an easy way to become part of the new Internet

community. On the desktop screen of Win95 is an icon for "MSN", the Microsoft Network. By clicking on this icon, the user was quickly connected to MSN, provided their credit card number, and were in short time surfing the 'Net. Unfortunately, the early version of MSN didn't meet the normal expectations for Microsoft products — the environment was adorned with superb graphics, but the pages were excruciatingly slow to load.

However, MSN has changed its format and is quicker loading. While MSN does offer content of its own, it is primarily a gateway service. If you accessed MSN via the icon on your Win95 desktop, you are most likely using Microsoft's Internet Explorer ... Microsoft's answer to the Netscape browser.

While MSN originally offered a set number of free hours of service for a monthly fee, they recently eliminated that pricing schedule in favor of a flat-rate of $19.95 per month for unlimited service. PC Magazine indicates there is also a standard plan which gives the user 5 hours free for $6.95 per month, with extra hours at $2.50 each. I tried logging on to the MSN web page (*http://www.msn.com)* to verify the pricing, but I was not able to access the information without downloading a small program and completing a "passport' profile. To its credit, MSN does offer its content in English, German, and Japanese. MSN offers over 297 POPs in the US.

For more information, click on the "MSN" icon on your Win95 desktop or contact:

The Microsoft Network
Redmond, WA
800-386-5550

Internet Service Providers

Internet Service Providers, or ISPs for short, are merely gateways to the Internet. In general, these services do not carry any content of their own. Most, though, do have "home" pages that allow the neophyte user to more easily navigate the Internet. There are usually links to popular sites, and to most of the Internet search engines where you can enter keywords on topics you'd like to search for.

Because these ISPs are so similar, it does not make a lot of sense to detail what each offers. To save time and space, the features of several ISPs have been summarized in **Table 1**, allowing you to see some of the benefits and services of each. The bottom line I used in selecting my service was the number of POPs and their locations (since I travel a lot), the reliability of being connected to my service when I dial, the availability storage space for my World-Wide Web pages, and the capability of using either a UNIX shell or a graphical (SLIP/PPP) interface.

If you sign-up for one of these services and you use the Internet Wizard Installer, the installer may ask you for several service-specific variables that identify your service on the Internet. These variables tell the computer where your "home" service is and what the names are of the mail and news reader servers. These variables will be supplied to you by the ISP, and should be filed for future reference in case you need to re-install your dialer program or if you get another computer and need to install your service on it, too.

The install program may ask you for the primary and secondary *Domain Name Server (DNS)* numbers. These are groupings of numbers in the following form: 165.113.1.36 This happens to be the primary DNS for my CRL service.

The program may also ask for your POP3 mail server, your SMTP mail server and your NNRP newshost (for your Usenet news groups). Although some service may use numbers, most provide a name server such as mail.crl.com (for my POP3 and SMTP servers) and nnrp.crl.com for my news host.

If you load Netscape right out of the box, the World-Wide Web browser will have the Netscape home page as its default. This means when you start Netscape and access the World-Wide Web browser program, it will go to the Netscape home page ... not necessarily a bad thing. However, you may want to start in your service's home page. This can be changed using the "Options, General Preferences" under the "Startup section." Instead of the Netscape home page, you can enter your ISP's home page, usually in the form of "http://www.*servicename*.com" where "servicename" is the name of your ISP. For example, the home page of my service is "http://www.crl.com".

Finally ...

This should provide you with enough information to sign up and get on line. Remember, you will need a screen name and password. I suggest you make up several screen names in case the first or second choice is already being used.

The password should also be made up ahead of time. Remember, the password is case sensitive, e.g., if I enter my password as "RogEly497", I must type this in *exactly* each time I log on. The computer will refuse to allow me to log on if I use "rogely497" or "ROGELY496". The use of numbers and mixed case letters is recommended.

In the final installment of this Internet series, I'll

give you some World-Wide Web sites and information resource locations that you can check out. If you have any sites you find particularly useful, email them to me at rogely@crl.com and I will include them in the next article. Include the Uniform Resource Locator (URL) and a brief description of the content of the site.

Association Purchases LCD Projector; Computer-Based Presentations Encouraged

The Northwest Association of Forensic Scientists purchased a Polaroid P-105 LCD projector last summer for use at its biannual meetings. The projector is able to accept the input from up to 2 IBM-compatible PC computers, 2 Apple Macintosh computers and 2 video tape records during a session.

The projector is one of the new generations of multimedia computer equipment that is making the presentation of a technical paper at a meeting a lot more professional, very inexpensive, and very simple.

The projector accepts the video output from PC and Mac-based computers and video recorders and projects the image on normal projection screen. The projected image size is adjustable up to about 8'x8'. The projector displays real-time images from the computers and allows the user to be interactive with programs using the keyboard and mouse while the audience watches the output. The image quality is comparable to 640x400 resolution.

In addition, the projector will project video images from a video tape player on the screen. This allows the user to make a presentation using presentation software such as Microsoft's PowerPoint or Harvard Graphics and integrate video footage into the presentation. The projector also supports stereo sound, and is equipped with external stereo speakers.

The projector replaces the expense and drudgery of TV monitors commonly used in meeting format presentations. The image clarity and color of the projector is fair superior to similar images produced by less expensive LCD projection panels that are used in conjunction with high-intensity overhead projectors. Such a projector, rented from a hotel for a meeting, usually costs about $500 per day. When the Association Board approved the purchase of the projector, it was estimated the projector would pay for itself in about 4 meetings.

The projector is available on a first-come, first-serve basis for workshops. The projector and a laptop computer loaded with Windows 95 and Microsoft's Powerpoint is available for making technical presentations during the meeting. The laptop is also capable of accessing outside telephone lines so real-time Internet sessions can be observed by the audience. Further, the projector and computer are used to display the Association's business meeting agenda and Committee reports.

Presenters at the Association's meetings are encouraged to create their presentations using Microsoft's Powerpoint. Most analytical instruments being purchased being purchased with computers and most home computers are coming with the Microsoft Office 95 or 97 suite of applications (Word, Excel, Access, and Powerpoint). Powerpoint is a simple program to use, and allows for the creation of graphs and charts, clipart, and the importation of analytical data such as infrared and mass spectra in vivid, bright color.

Before the Association purchased the projector, presenters would have to create overhead using a computer and laser printer, or by using a program like Powerpoint. If the presenter's agency had the money, they could have their Microsoft Powerpoint file sent to a service bureau where high quality color slides were created. This process, however, is cost prohibitive with each slide costing about $10 each. Obviously, if there was an error on a slide, it meant another $10 to correct it and some down-time while the slide was made.

With Microsoft's Powerpoint, the user is able to alter their presentation right up to the moment it is presented. In fact, a single presentation can be tailored to many different lengths of talks by "hiding" slides that are not necessarily important to the audience.

To encourage members to use the projector to help them create and make very professional-looking presentations, a workshop on the use of Microsoft's Powerpoint will be given at the Las Vegas meeting in the Fall.

If you have questions concerning the use of the LCD projector or its capabilities, contact Roger Ely (415) 744-7051 or Lisa Caughlin (916) 732-9690 x231 for more information.

Meeting Attendance Status

The following Regular members are in danger of temporarily losing their Regular member status for failure to comply with the Association's "1 in 6" meeting rule. This Bylaw was put in place many, many years ago to keep the members of the Association active in the business of the Association. If you are on this list, you can stave off becoming an temporary Associate member by attending the Fall 1997 NWAFS joint meeting with the Southwest Association of Forensic Scientists, the California Association of Toxicologists, and the Southwest Association of Forensic Toxicologists.

If you have recently attended a meeting, or believe there is an error in the records below, please contact Roger Ely at (415) 744-7051 immediately. If you would like a letter explaining your personal membership situation as justification for attending the any NWAFS meeting, also contact Roger.

These members **must** attend the Las Vegas meeting or lose their Regular membership status:

Andrews, Kathleen M.
Aoki, Minoru

Boshears, Frank
Brewer, Lisa

Caughlin, Jeffrey D.
Chinn, Donald

Davidson, Arthur W.
Dietz, William R.

Elsoff, John

Fujii, Kenneth

Gilmore, Allan

Harmor, Gary C.

Jeffery, Wayne K.

Kirkwood, Carolyn M.

Lasater, Boyd E.
Lawless, Karen L.
Lee, Lansing J.
Lee, Marsha

Martin, Robert
Mazzega, Stefano

Northrop, David M.

Pollock, Edward M.
Poon, Hiron

Richardson, K. Denise
Rucker, Catherine L.
Rynearson, Joe

Shepherdson, Donna
Sottolano, Steven M.

Weiss, Egle L.

The following members are currently classified as Associate members because they have failed to meet the "1 in 6" meeting requirement. They will remain Associate members until they attend an Association workshop, meeting, or instructed a workshop for the Association. Those members are:

Abercrombie, Tom
Asselin, Michael

Bekkedahl, Terry J.
Bigelow, Patrick B.
Blake, Edward
Brady, William
Brown, John A.
Bussoletti, Robin

Carpenter, Elizabeth
Chan, George K.
Coons, Terry M.
Croteau, Michael

Dickinson, Larry
Dingeman, Roger H.
Dudschus, Maureena

Formoso, Edward

Gresham, William R.
Grimsbo, Raymond A.
Groff, Richard D.
Grubb, Michael

Hanson, Terry

Johnson, Chris E.
Johnson, Eydie S.
Johnston, George

Kalchik, Mark
Kalyn, Howard

Laycock, David A.

Mann, Dale
Mink, Rocky

Neilson, Erik
Netwal, Thomas B.

Ogilvie, Christine
Ols, Martin G.
Ostrom, Brian E.

Parangot, Mariam J.
Phillips, Robert C.
Predmore, David

Riis, Rex Edwin

Schanfield, Moses
Sewell, Chris G.
Shajani, Nizar K.
Sorgen, Gary J.
Stahlke, Nick
Stone, Randall

Telyea, Brad
Torris-Hormann, Susan

Urtiew, Natalia P.

von Beroldingen, Cecilia

Wampler, Randall
Wraxall, Brian

Abstracts of Papers Presented At The Spring 1997 NWAFS Meeting

Missoula, MT

"The Supreme Court Decides: Intoxication and Accountability"
Joe Mazurek, Montana Attorney General
Montana Department of Justice

Montana Attorney General Joe Mazurek will welcome delegates and provide a brief overview of *State of Montana v. James Allen Egelhoff* which was decided in the United States Supreme Court. The case involved the age old question of whether intoxicated people are responsible for the acts they commit while under the influence of alcohol - in this particular case, murder.

"Drug Testing in Professional Sports"
Dr. Brian Finkle
Chief Consulting Toxicologist
National Football League

Presentation will describe workplace drug testing with special emphasis on the National Football League (NFL) program. How the program is structured, the preventive features which have been installed by the NFL, and the analytical toxicology procedures associated with this drug testing program will be discussed.

"Montana Right Wing Extremists Groups"
Lee Johnson
Montana Criminal Investigation Bureau

This presentation will identify and describe statewide anti-government militias and the Montana based "Freeman." Local confrontations between law enforcement and these groups will be presented in an effort to identify the violent tendencies of extremist group involvement.

"NWAFS Web Site: Macabre or Cool, What's Your Opinion?"

Lisa Caughlin
Sacramento County Laboratory of Forensic Services

Recently, I announced the opening of the Internet web site for the NWAFS on the Forens-L Internet list. I have received many comments regarding this site. This presentation will demonstrate the site for the membership and look at the comments that have been received. Members are encouraged to bring creative suggestions of what they would like to have available on the NWAFS web sit for their reference use.

"Alcohol: Three Case Studies"

Scott Schlueter, Melanie Shaw, Dr. Gary Dale, Jim Hutchison, Lynn Kurtz*
Montana Forensic Science Division

A discussion of three recent cases analyzed at the Montana State Crime Lab will be presented — including the scene descriptions, results of the autopsies, and analysis of the samples.

Case #1: Victim was described as an alcoholic, 41 year old male, who was found with his trousers and underwear around his ankles and dead in a closet in a trailer house. There was no evidence of trauma noted on the body and there was no pornographic material present, ruling out an autoerotic episode. Cause of death was not determined at the scene or during autopsy. Analysis of submitted laboratory samples indicated high levels of methanol. Investigating officers returned to the scene and found a gallon bottle of windshield washer fluid that contained 35% alcohol under the kitchen sink. Cause of death in this case was due to methanol poisoning. Manner of death was suicide.

Case #2: Victim was described as a 75 year old female who was found dead, lying on the snow between her residence and her vehicle. Some small patches of fresh blood were noted in the snow around her, but no evidence of trauma was noted. Cause of death was not determined at the scene or during autopsy. Analysis of submitted laboratory samples indicated the presence of ethanol in both the blood and urine, and also high levels of glucose in the urine. Cause of death was attributed to hypothermia. Manner of death was accidental with alcohol (ethanol) as a contributing factor.

Case #3: Victim was described as a 36 year old, non-drinking female, who was found dead, lying on the front porch of her home with her coat for a pillow. A small amount of fresh blood was noted oozing from one ear during the autopsy, but no visible signs of trauma were noted. Again, in this case, no cause of death was found during autopsy. Noted during the autopsy was the presence of a large fatty liver and signs of atrophy of the brain. Analysis of submitted laboratory samples indicated a very high blood alcohol concentration and presence of caffeine in the blood. High levels of glucose were also detected in the urine. Cause of death was attributed to hypothermia. Manner of death was accidental with acute alcoholism as a contributing factor.

"Hazardous Materials Response Initiatives by the FBI Laboratory"

R.S. Murch*, D.C. Richardson, and D.L. Wilson
FBI Laboratories

Beginning in October, 1995, the FBI Laboratory determined the need for strong scientific and technical capabilities against the illicit use of hazardous materials (chemical, biological and nuclear) either by terrorists or criminals (e.g. environmental crimes). The roles for the FBI Laboratory in this arena are primarily scientific and technical integration of the array of Federal resources, and forensic exploitation of the potentially hazardous crime scene. This vision gained momentum with the assumption by the Laboratory of coordinating responsibilities for the multi-agency chemical-biological incident response for the 1996 Olympic Games in Atlanta. In May, 1996, the Hazardous Materials Response Unit was created, with all requested resources appropriated in Fiscal Year 1997. Several other initiatives are underway to bring this program into a position of principal leadership at the national level.

"Mexican National Methamphetamine Laboratories in Central California-Trends and Adaptations Over Time"

Julie A. Doerr*, Mark F. Kalchik, and Jerry Massetti
California Dept. Of Justice Crime Lab

Since the early '90's, Mexican Nationals have been highly involved in methamphetamine production, virtually taking over the whole enterprise from the more traditional biker gangs. This involvement has encompassed the entire state of California, including the central valley and central coast regions. These laboratories operate on a large scale, producing 20 or more pounds of methamphetamine per batch.

As controls have been placed on hydriodic acid and bulk ephedrine, hydriodic acid manufacturing sites and ephedrine/pseudoephedrine extraction sites have also been encountered.

"The Duquenois-Levine Test Revisited"

James B. Crippin
Colorado Bureau of Investigation

The Duquenois-Levine test has long been considered the standard presumptive color test for cannabis. It is quick, simple, easy to use and utilizes relatively cheap chemicals. There are very few other compounds that give false positives.

Traditionally, hydrochloric acid has been used as the acidifier in the Duquenois-Levine reaction. The main drawback with the test is its use of concentrated hydrochloric acid. Hydrochloric acid gives off a strong odor. The fumes tend to degrade nearby objects as well as any dropper bulbs that they come in contact with. The fumes also tend to "smoke-up" other objects in the area.

I have been unable to find any record of any other type or concentration of acid ever having been tried in the place of hydrochloric acid. For the past three years I have tried various other acids in varying concentrations. The only other acid that gives the same colors and transfers is a 65% sulfuric acid instead of concentrated hydrochloric acid, the reaction proceeds the same and is virtually indistinguishable from the "normal" Duquenois-Levine test.

"Application of Variable-Pressure SEM for Gunshot Residue"

H.P. Lentz, A.J. Schwoeble, and Kristin Lee*
R.J. Lee Group, Incorporated

Scanning electron microscopy (SEM) analysis provides an opportunity for better speciation of gunshot residue (GSR) than the more traditional analysis by atomic absorption (AA). However, SEM analysis has been time-consuming and expensive, which has limited its application in this area. This paper describes a high-volume, cost-efficient SEM with an automated GSR analysis package. The system allows unattended analysis of GSR stub samples; on-line review of data, images and spectra; and one-button relocation of flagged, potential GSR particles. The variable-pressure feature enables the analysis of SEM stub samples, clothing, fabric and various other materials in an uncoated condition.

Specimens in the "as-collected" or "received" condition can be placed directly into the SEM for examination, eliminating the possibility of particle loss by redeposition. The PERSONAL SEM (PSEM) with GSR application software provides a high-speed, accurate analysis with particle classification information, images and elemental spectra printouts at the completion of each analysis.

"Persistence of Gunshot Residue on Clothing"

Matthew Noedel*, Ray Kusumi, and Jim Krylo
Washington State Patrol Crime Laboratory

A study was performed to determine gunshot residue persistence on clothing. Test patterns were generated by shooting into samples of cotton/polyester fabric at close distances. These test shots were then exposed to a variety of different handling techniques including light handling, rough handling, machine washing/drying, and burying in soil. Visual Griess and sodium rhodizonate processing for gunshot residue was performed on each test pattern. Differences in the appearance of the gunshot residue pattern are outlined and presented.

"Developing Bloody Prints on Cloth with Amido Black"

Daniel Holshue
Montana Forensic Science Division

This presentation will cover latent prints left in blood on cloth. It will consist of slides showing multiple pieces of cloth (bed sheet) with different latent hand prints with varying amounts of blood on each. These were treated with amido black, a chemical that reacts with blood proteins to enhance areas that are contaminated with blood. After treatment, photographs were taken and then enhanced by one of the vendors, "More Hits". Photos will be shown before and after enhancement.

In a previously worked case, heavy deposits of blood were found which had almost turned black and were of no value. The one palm print that was identifiable was not visible at the time of processing. It was enhanced using the method described in the above paragraph. It is important for those collecting evidence to be aware that more than just the visible blood print may be present on an item. Further processing may be needed so that "all" ridge detail can be seen and a possible identification made.

"The Evaluation of Sexual Assault Evidence: Employing the Differential Extraction Method: Some Case Examples"

Rodney H. Andrus*, Edwin K. Scruggs, Kenneth Penner, Delia Frausto-Heredia, and Michi L. Lee
California Dept. Of Justice Crime Lab

The differential extraction procedure has been utilized for some time in forensic laboratories conducting sexual assault evidence examinations, especially those with DNA analysis and typing capabilities. The power of this relatively simple method to effectively separate the biological and genetic components of sexual assault evidence, has greatly enhanced the significance of DNA typing interpretations.

This laboratory has found that the differential extraction procedure is also a valuable addition to its basic compliment of methods used in sexual assault stain characterization. Its effectiveness in identifying spermatozoa will be discussed through a presentation of a variety of cases where the more traditional identification methods of acid phosphatase screening, sperm searching and p30 protein analysis provided only negative or, at best, inconclusive results.

"Trace Evidence - Science or Skill?"

Richard Saferstein, Ph.D.
Mt. Laurel, NJ

In the past five years, there have been significant forces at work that are bound to have impact on the role forensic trace evidence analysis plays in the courtroom and on the laboratory bench. For many, it will be easy to ignore these events and carry on business as usual, but at this point in our history, the forces of change are gaining momentum. The reality of the situation is that the defense bar and an enlightened judiciary will impose changes on our way of doing business if we, in the forensic science community, don't begin to take forceful actions to create the image of a profession bent on improving its technology; striving to define the significance and value of its work products; desiring to implement quality assurance programs in its workplaces; and one that is very mindful of the high ethical standards that must guide its practitioners.

This paper will discuss how we can expeditiously proceed to implement practices that will thoroughly demonstrate to the scientific and legal communities that forensic trace evidence analysis is derived from acceptable scientific practices governed by appropriate quality assurance concerns.

"Adventures in Babysitting: How Not To Treat Your Ward!!!"

Judith Hoffmann, Lynn Kurtz, Scott Schlueter, Dr. Gary Dale, and Jim Hutchison*
Montana State Crime Laboratory

Perhaps one of the saddest and most tragic cases in recent times occurred during the evening hours of September 9, 1995 in Kalispell, Montana. Two and a half year-old Joshua Scott Norman died as a result of intentional poisoning at the hands of his teenage (15 years old) babysitter.

Early efforts at denial of any wrong doing on the part of the babysitter were quickly dispatched through the combined efforts of the State Medical Examiner, Toxicology and Chemistry Sections of the Montana State Crime Laboratory. The lab was able to show that young Joshua Norman had succumbed to lethal levels of codeine and phenol (one of the active ingredients present in Pine-Sol).

The lab's analytical results provided the investigators of the Kalispell Police Department with the necessary tools to challenge the babysitter's questionable participation. After 10 days of compassionate, though painstaking interviews, the babysitter confessed to intentionally "dosing her young ward". Consequently, the babysitter was remanded to adult court where she plead guilty to homicide.

This case, though tragic and heartbreaking, may not have had a successful conclusion if not for the combined efforts and close communications between the State Crime Lab, Kalispell Police Department, Flathead County Coroner's Office and the Flathead County Attorney's Office.

The analytical results of the toxicology testing will be presented and discussed.

"Natural Fibers, Furs and Hair"

Phyllis L. Friesen
The Arbidar Company

There are over 2000 usable natural fibers growing in all parts of the world. This wide world has now become so much smaller due to the ease of modern transportation that we may someday be seeing nearly any of these fibers.

Of these 2000 natural fibers, only about 50 are commercially usable. As a general rule, however, with worldwide travel so available to everyone, we may easily come in contact with some that are not of the 50 commonly used fibers. We must be ever alert to a fiber, fur or hair that we have not been in contact with previously.

Some very common fibers that we are accustomed to seeing only in a color-dyed form, are now being grown in a natural color due to selective breeding and advanced plant genetics.

Fibers that have not even been grown in the U.S. for years are now being brought on the market due to changes in the law. Farmland used for older common crops is now being utilized for the more uncommon crops due to the drop in use of some formerly grown cash crops. Fibers that we have never seen before are now being grown in the U.S. and are quite commonly used in many forms and we may easily come in contact with them at any time.

Hair and fur evidence is ever important and the ability to identify each species or breed that the samples originated from is of the utmost importance in the pursuit of forensic science and research.

"Practical Low-Power Photomicrography"

Kay M. Sweeney
Kirkland, WA

Standard laboratory equipment can be successfully used to create high quality color photomicrographs. Equipment needed includes: stereo microscope, video-style tripod and SLR, 35mm manual camera. Control of specular and stray lighting, as well as focusing techniques, centering, and exposure, are critical to image quality. A few practice drills in aligning the camera lens with the microscope eyepiece, will guarantee consistent high-quality photographs.

"Parent-Aid Program"

James O. Pex
Oregon State Police Forensic Lab
Coos Bay, OR

The Parent-Aid Program was developed by this laboratory in response to the changing trends in law enforcement. Following the model for community policing, we contacted the schools and partnered with them to develop a drug testing program that would help parents deal with their children when drug use was suspected. As a result we started a program where parents could collect a sample from their child and bring it to the laboratory for free testing. This included an EMIT screen and confirmation by GC/MS. The results were only provided to the submitting parent. The schools and other law enforcement agencies were not privy to the results unless the parent wished to tell them. The schools quickly adopted the program as it was a mechanism to deal with troublesome students and their parents who were usually both in denial about drug use.

In the past two years, approximately 370 samples have been tested. Every high school and junior high school in the county is using the program. Results indicated that this program is one of the earliest methods of intervention available as well as being one of the most cost effective.