



CRIMEScene

Newsletter of the Northwest Association of Forensic Scientists

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human sperm cell, head only (1000x)

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PRESIDENT'S MESSAGE

MATT JORGENSON

I am sitting in my office on a Saturday so that I can write this message and spare my attention-deficit-disordered brain the constant interruptions that seem to come from the phone, from others in the lab, and from the head office (yes – even lab directors have to answer to someone). I am reminded almost daily how many directions we, as forensic scientists, are asked to go in...and usually those directions are supposed to be simultaneous! This is nothing new, of course...but it does require a certain amount of forethought and planning. Thank goodness for PDAs with calendars and for the constant reminders that cell phones can be programmed with.

As we barrel our way through the spring, I would like all of you to put one more tickler on your calendars: September 21-25. This is when our annual training seminar will be held and it will be hosted here in Colorado at the Marriott Inn in Fort Collins. The official flyer and registration packet will not be complete until late April or early May, but as I know that training money is slim and planning has to start happening earlier and earlier, I wanted you to all be aware of it as soon as possible.

This seminar is going to be a joint seminar with the Rocky Mountain Division of the International Association of Identification. To that end we will be having several workshops dedicated to crime scene processing – one of which will involve a buried body and another will be on the processing of trajectories from a shot-up car. Still another topic that will be addressed will involve bugs and botany. Still more classes are in the works.

We have confirmed a serial number restoration class and a class in shotgun pattern analysis. Also, the FBI has graciously accepted our call to put on a "cradle to the grave" class on explosives analysis involving some class room and field days. In addition, we are planning a round-robin seminar series on mixture DNA samples, several instrumentation classes (mainly in the area of chemistry), and are currently trying to firm up a couple of topics for trace analysis. This should make for a very robust training seminar, and I am very encouraged by the early enthusiasm that is being shown by potential participants and instructors alike.

For those of you that have planned one of our conferences, you can attest to the hard work and dedication that goes into it. For those of you that have not been part of the planning before and may be interested in how it works, I would like to tell you that we did things a little differently this year. At the meeting in Boise, we decided to adopt a system of 'Functional Area Liaisons' to help the host of the conference plan classes in each discipline. We had individuals from several different disciplines take their knowledge of the field and the connections that they have made throughout their careers to help obtain timely training with topics salient to their discipline. Because we no longer have to rely on one person or one lab to search out topics and presenters, we will have an even greater ability to provide relevant training in all areas of forensic science. As not only NWAFS president this year, but also as the meeting's host, I can tell you that they have been fantastic! To these liaisons that have helped me – Thank You! You have once again given me reason to brag about the commitment our folks have to this organization!

That brings me to this next part...it was written as the theme for the last news letter, but bears repeating as I close for this installment: at the heart of all that we do as forensic scientists, never forget that we are **in service** to the justice system...and to each other. There are those among us that have been in this field for several years. Over my tenure in this profession, I have benefited greatly from your knowledge. It is invaluable that you continue to share it! Even if the class or topic you have in mind is one that may be an 'old hat' to you, we have several up-and-coming members of our organization that would benefit greatly from what you have to offer. For those that are newer to the field, I challenge you to get involved. There is so much that can be done as part of this volunteer organization to help your fellow professionals. As just a quick example, publish research that you are doing or the validation studies that were done to bring new techniques online. Another way to serve is to bring a topic or class to the attention of a board member or host of an upcoming meeting. The truly great thing about our profession is that the 'tried and true' ways of doing business continue to be replaced by new technology. Through new blood and new ideas we continue to stay relevant to our profession and to our service agencies.

Well – just that quick the phone is ringing and I, like the rest of you, better get back to the grind. Keeping in mind that although I don't look like Mac Taylor, can't pull off the one-liners like Horatio Cane, and I most certainly don't know nearly as much useless knowledge as Gil Grissom, I will just have to keep striving and not quit my day job. Keep fighting the good fight that we all get up and fight each day, folks. Your services are invaluable and so, too, is your commitment to serve...for that, I thank you.

Matt Jorgenson
President

CRIMESCENE is the official publication of the Northwest Association of Forensic Scientists. It is published four times a year in the months of February, May, August, and November. The Newsletter welcomes submissions from its membership, such as: technical tips, case studies, literature compilations, workshop or training notifications, reference citations, commentary, historical accounts, and other topics of interest to the membership. Please submit material for publication in Microsoft Word for Windows format as an e-mail attachment. For more information regarding the Newsletter or to make a submission please contact Kori Barnum at kori.barnum@state.or.us.



EDITOR'S MESSAGE

KORI BARNUM

Hello, NWAFS Members! I hope this spring finds you well. I have a couple of general association "housekeeping" items I'd like you to review:

- Our Fall Meeting is scheduled for September 21-25, 2009, in Ft. Collins, CO. Please save the date on your calendars, and look for more detailed information on workshops and registration in the coming weeks.
- Our 2009 Membership Roster went out in the mail in early March. **If you received a copy and your contact information was incorrect**, please contact our Membership Secretary, Corinna Owsley, at corinna.owsley@isp.idaho.gov with the updated information.
- **If you did not receive a copy of the 2009 Membership Directory**, you can access the online version at our website, www.nwafs.org. Go to the "Association News" section and select "Members Only Area". The User ID is "nwafs", and the password is "northwest". Once in the "Members Only Area", scroll down the page until you see the "2009 Roster".
- We will have two Board Member positions coming available at the Fall Meeting:
 - Technical Resources Secretary
 - Editorial Secretary

If you are interested in participating on the Board, please contact any Board member for information. It's a great way to see how a professional organization is run, to have an impact in meeting and policy decisions, and is also a nice nugget to add to the old resume.

- And finally, although this may come as a surprise to some of you (if you've been lucky enough to miss my pleas for newsletter submissions in the past!), we are always eager to accept submissions to the *CrimeScene* newsletter. If you have an item you'd like to publish, please contact me.

Happy Spring!

WHAT ARE FINGERPRINTS?

Christopher Getz, PA, MSW, PhD
Forensic Scientist, Crime Scene Investigator
Fingerprint Training Course
FBI Training Center, Quantico, VA

As you will see, fingerprints are covered under four categories of development in Anatomy and Physiology; the Reproductive System, Growth and Development, the Endocrine System, and the Integumentary System.

Fingerprints form naturally during the development of the human fetus, starting about 13 weeks after conception. The inner surfaces of the fingers and the palms of the hands, which are covered with hairless skin, develop tiny 'pods', which are the precursors of the pores for sweat glands. These pods, or ridge units, expand and unite with the neighboring pods, producing linear ridges, with the sweat pores distributed along their crests, raised above the surface of the surrounding skin (friction ridges). These form the familiar parallel and swirling ridges and intervening furrows, the exact pattern of which is determined by complex, irregular stresses in the skin. They can be seen not only on the pads of the fingers and thumb, but over much of the skin on the undersurface of fingers and toes, and on the palms and soles of the hands and feet.

The ducts of the sweat glands open through the pores on the crests of the ridges. The moistening of the ridges, combined with the texture of the corrugations, increases friction when in contact with smooth objects and this improves our grip. The regions of skin that have these epidermal ridges are richly supplied with sensory nerves. These include large fibers that terminate in specialized endings that are sensitive to mechanical stimulation, which are sensitive to touch and to low-frequency vibration of the skin. The individual nerve fibers in the finger pads branch over areas of skin and are very tiny, compared with similar classes of fibers in other parts of the body surface. The skin of the fingertips excels in their capacity to detect and discriminate the texture and three-dimensional shapes of surfaces. When fingertips are moved over a non-smooth surface, the resulting pattern of impulses generated in these nerve fibers is transmitted up to the brain and provides an acute tactile perception.

When sweat is secreted onto the skin ridges, it leaves an oily image of the pattern of corrugations on any surface that is touched. Since the exact forms of the corrugations are unique to each individual, and do not alter from birth to death, unless the skin is badly damaged, fingerprints provide an infallible method of identification.

The understanding of fingerprints and how they develop during the growth and development stage, as well as how they help us maintain homeostasis through the endocrine system and the integumentary system by allowing the body to control water balance, is an important detail in learning about how our bodies develop and maintain life.

WHAT ARE FINGERPRINTS?**Christopher Getz, PA, MSW, PhD**

Fingerprints are individual to each person; this is how the study of fingerprints helps us identify an individual when a crime has been committed. Identical twins do not have the same fingerprint patterns, this is because during the development stage, the stressors on each fetus are different and thus the fingerprints develop differently. However, nuclear DNA in identical twins is the same; this can make it somewhat more complicated to identify one twin over the other. Fingerprints can also identify what a person has touched, because surface particles adhere to the fingerprint ridges and valleys of each person identifying what was touched. Each surface has different particle make-up.

Below we will see the three different fingerprint patterns and learn how to read them.

**Whorl Pattern****Loop Pattern****Arch Pattern**

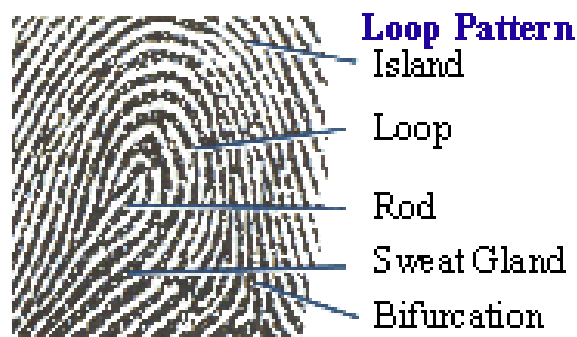
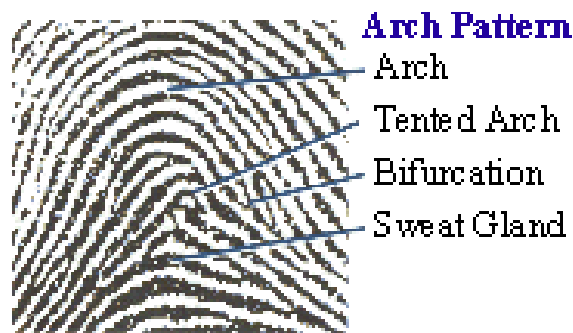
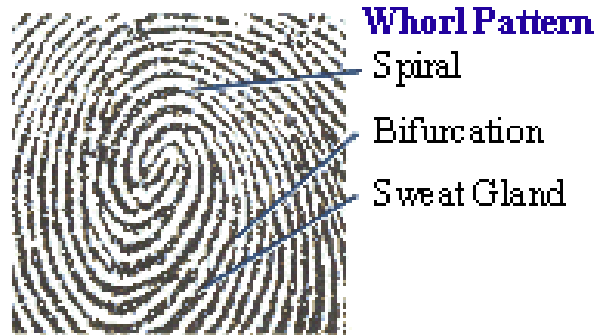
SWEAT GLANDS - Each fingerprint pattern contains about 500 sweat glands. The moisture they produce allows the fingerprint to be electronically imaged. Sweat glands also serve as an important part of the endocrine and integumentary systems because they help the body maintain the homeostatic environment by helping regulate the fluid balance, and by cooling the body down by excreting moisture through the pores.

SEBACEOUS GLANDS – Each fingerprint pattern contains about 150 sebaceous glands (oil glands). The oils they produce allow the fingerprint to be identified and electronically imaged. Sebaceous glands also help keep the skin moist, subtle and resilient.

Without the above glands, fingerprint imaging would not be possible, because no impression would be left on a surface to be identified.

WHAT ARE FINGERPRINTS?**Christopher Getz, PA, MSW, PhD**

Now let's learn a little bit about how to identify the patterns of fingerprints. Below are some examples.



Pictures used in the article were obtained from the US Department of Justice, FBI Training Center database on fingerprint identification and IAFIS (Integrated Automated Fingerprint Identification System).

2009 TWGFEX Committee Meeting, Symposium & Demonstration Courses

Technical Working Group for Fire and Explosives (TWGFEX) Committee Meetings September 12 & 13, 2009

2009 TWGFEX Symposium - September 14, 2009

This is a one-day seminar for fire and explosion laboratory analysts and scene investigators with presented papers of interest to each group. The symposium will be followed by a number of workshops. This symposium and courses are sponsored by the National Center for Forensic Science (NCFS), hosted by University of Central Florida (UCF) and funded by the National Institute of Justice.

Fire Debris Analysis Demonstration Course

Online component begins July/August 2009

Pre-Requisite: Attending TWGFEX Symposium - September 14, 2008 (all day event)

Workshop: September 15-18, 2009

Explosives Debris Analysis Demonstration Course

Online component begins July/August 2009

Pre-Requisite: Attending TWGFEX Symposium - September 14, 2008 (all day event)

Workshop: September 15-18, 2009

Organic Chemistry for Fire Debris Analysts Demonstration Course

Online component begins July/August 2009

Pre-Requisite: Attending TWGFEX Symposium - September 14, 2008 (all day event)

Workshop: September 15, 2009

Fire Dynamics Demonstration Course

Online component begins July/August 2009

Pre-Requisite: Attending TWGFEX Symposium - September 14, 2008 (all day event)

Workshop: September 15, 2009

Post-Blast Investigation Demonstration Course

Online component begins July/August 2009

Pre-Requisite: Attending TWGFEX Symposium - September 14, 2008 (all day event)

Workshop: September 15, 2009

Price: Registration is paid by the NCFS, courtesy of the National Institute of Justice

Location: Florida Hotel and Conference Center

1500 Sand Lake Road, Orlando, Florida 32809

Telephone (407) 816-5182, fax (407) 855-9863

Website: www.thefloridahotelorlando.com, Registration form: <http://www.ncfs.org/training.html>

For more information: Contact NCFS, Orlando (407) 823-6469; Fax: (407) 823-3162



JOB POSTING

Senior Public Service Administrator, Option 7 (Commander) Illinois State Police, Division of Forensic Services, Forensic Sciences Command

The Illinois State Police, Division of Forensic Services (DFS), Forensic Sciences Command (FSC), with a staff of almost 500, provides forensic science services to 1200 law enforcement agencies within the State of Illinois. These agencies submit approximately 115,000 cases each year. It has maintained a reputation of innovation and advancement for the forensic sciences profession. Through leadership of the former and present commanders, the FSC achieved a number of notable milestones.

The FSC is the third largest forensic science organization in the world. The FSC eight operational laboratories and Research and Development Laboratory were the first laboratories in the world to be accredited by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board. The FSC is currently accredited under ISO 17025 standards. The FSC developed the first organized program of dedicated training coordinators for the training and education of new forensic scientists. The FSC developed the first cumulative quality assurance program. Both of these programs are well regarded and have been emulated by a number of forensic science organizations.

The Illinois State Police, Division of Forensic Services seeks a dynamic and forward thinking individual to succeed the present Commander who will be retiring later in 2009. This individual must have the tools and credentials to build on the successes gained by the former commanders and take the FSC forward to face the challenges of the forensic science profession in the 21st century. The skill sets must include: thorough knowledge of and experience in forensic science; knowledge of national trends and developments in the management of forensic services; knowledge of and experience with ISO 17025 standards; proven track record of successful innovative changes; excellent verbal and written communication skills; and strong leadership abilities.

Therefore, the Illinois State Police, Division of Forensic Services announces the following position opening:

Senior Public Service Administrator Option 7 (Commander), Forensic Sciences Command

Location: Springfield, Illinois

Salary range: \$4,295 - \$10,093 per month.

Closing Date: June 30, 2009

Selection: Through an interview process.

For Information on the Command, Qualifications and Summary of Duties: Access the following link:
www.isp.state.il.us/forensics/

Application Procedure:

Interested individuals need to access the Department of Central Management website for application procedures: <http://work.illinois.gov/>

In addition, the Division of Forensic Services requests a letter stating interest in the position and a copy of a current resume sent to:

Ms. Carol Walters

Forensic Sciences Command

801 South 7th St Suite 900A

PO Box 19461

Springfield, Illinois 62703-2487

While Technology Advances, Crime Stays the Same
Matthew Noedel, Noedel Scientific

While researching information from the web I recently ran across an interesting site. The web site is a product of NYTimes.com and can be found at:

http://spiderbites.nytimes.com/free_1909/articles_1909_03_00003.html

The site features reproductions of articles published in the New York Times from 100 years ago. While scanning the numerous headings I came across this entry from March 11, 1909. What was of interest to me was that:

- a) I thought bicycle cops were a relatively recent development and
- b) I thought stealing copper for scrap was a relatively recent criminal activity

Figure 1: An interesting article reproduced here for educational purposes only.

FIVE BOYS CAUGHT IN A RAID.
Police Catch Them Stealing Brass
Fixtures in Studio Building.

Published: March 11, 1909; Copyright © The New York Times

While Technology Advances, Crime Stays the Same

Matthew Noedel

Consider this a lesson exemplifying the axiom “you don’t know what you don’t know”! Upon finding this article I drilled deeper into the net and found a comparable site credited to George Garrigues and subtitled “A collection of contemporary articles and illustrations about the City of Angels at the turn of the last century.”

<http://www.ulwaf.com/LA-1900s/index04.html>

Among the interesting reports collected here one can find three stories that describe Los Angeles’s earliest police officer murders and officer involved shootings. One account reviews the death of a suspect who took his own life with Cyanide! I’ve included for your educational perusal something a bit lighter reported to originate from October 1909.

Figure 2: An interesting article reproduced here for educational purposes only.

Los Angeles County Courthouse



Los Angeles Daily Times, Oct, 13, 1909

O, WHAT A SURPRISE WOMAN SUMMONED FOR JURY DUTY IN LOS ANGELES

SANTA MONICA, Oct. 12. — The joke is on Judge Hervey and the officers who drew the names of the jurors to do service in Department Seven of the Superior Court, beginning the 9th inst. On the list appears the name of Johanna Engleman of this city, and the Sheriff's deputy came here today with a summons for the juror named.

Calling at No. 1338 Fifth-street for Johanna Engleman of this city, the deputy was received at the door by a good-natured German woman. She expressed surprise that she should be called upon to do jury duty, but said she would be present in court at the appointed time. . . .

She says it may be all right for women to become active in school matters and she believes they might even serve on juries, although in her opinion a woman generally is too tender-hearted to make a good juror. . . . she is sure that she could not by her vote in the jury box say the word that would place a rope about a man's neck and consign him to the gallows.

As for women in politics — none of that for her, says Mrs. Engleman. The place for women is at home, in her estimation. She is entirely satisfied that the men should do all the voting, conduct the campaign and fill the offices. . .

While Technology Advances, Crime Stays the Same

Matthew Noedel



Los Angeles Daily Times, Oct, 24, 1909

BALKED

NOT FIT FOR FEMALE EARS

There will be no women summoned for jury duty this week in Justice Williams's court, as was announced by the Prosecuting Attorney.

In plans for having members of the fairer sex decide the fate of men charged with violating a park ordinance, the prosecutor failed to reckon with Chief of Police [Edward F.] Dishman [pictured]. An officer working under the Chief summons all persons to do jury duty, and the head of the department will not stand for dragging women into Police Court when there is no necessity for it. . . . The venire officer was told to serve no summons on women.

Guy Eddie, Prosecuting Attorney, and Samuel Barnes Smith, his deputy, lathered the idea of giving the suffragettes a place on the Police Court panels.

. . .

"Women are qualified to act as jurors," he declared. "The Superior Court judges have decided on that point. Woman is not the slave of man she once was." . . .

It was pointed out to him that, if a few women insist on listening to foul language, necessarily brought out in many Police Court cases, it is because they are weak and must be protected from their weakness.

"Well, they want to sit as jurors," he declared. "The best way to cure them is to give them a taste of it. If they heard some of these things they would not be so anxious for places in the jury box."

The Chief of Police takes an entirely different view of the matter. He holds that it is an insult to women of refined tastes to drag them into cases which are too disgusting to be given publicity.

"When we run out of men, then it will be time enough to think of getting women for jury duty," he said yesterday. "Such a thought is not to be tolerated. . . .

"Just picture a sensitive woman, with a sense of decency, sitting through some of the cases it is necessary to deal with"

The Chief does not take the stand that women would not make good jurors, but he desires to save those, who do not know the nature of many court cases, from being insulted.

Note: This is a different court from that in the stories above and below.

While Technology Advances, Crime Stays the Same

Matthew Noedel

Los Angeles Daily Times, Oct. 30, 1909

**THE FRUITS OF FAME
THREE MEN DESIRE TO WED
JURYWOMAN JOHANNA**

SANTA MONICA, Oct. 29 — Jurywoman Johanna Engelmann of this city, the first woman to do venire service in California, is tasting the fruits of fame.

. . . she has been the victim of kodak fiends and newspaper reporters, and in the Superior Court has been the object of the gaze of the curious crowd. Her face has been printed in the papers, and her name has appeared so often that her correspondence has grown greatly.

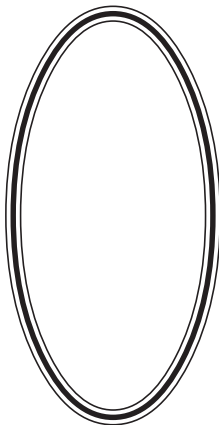
Three of the letters contain proposals of marriage. One, she coyly confesses, is from an immensely wealthy man. She has also received an application from a person anxious to become her private secretary. . . .

Mrs. Engelmann is still inclined to look upon the matter in the nature of a joke, although admitting that she sees no reason why her judgment or that of any other educated, thinking woman who reads and studies, should not be as good as that of men. . . .

She continues to entertain the opinion that those of her sex are imbued with as keen a sense of justice as men, and that they are just as competent to recognize the right or discern the wrong as their brothers.

The fact that women have not heretofore been recognized in California as competent jurors is, to her way of thinking, no bar to their being drawn in the future for such duty, provided the law is as the judges of the Superior Court of Los Angeles county are interpreting it.

Note: Mrs. Engelmann was excused from serving upon a peremptory challenge. The *New York Times* version of this story gave her name also as Josephine Anna Engelman.



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