



Australian and New Zealand FORENSIC SCIENCE SOCIETY



May 2011
Issue 31

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*Next Meeting: 29th June
at the Australian Museum
See Page 5 for details*

*Coming Soon:
Inside the Forensic World*

NSW Branch Newsletter

NSW Branch ANZFSS Inc ABN 33-502-753-392

Membership

Please note correspondence regarding branch meetings and social events will now cease for members who have not renewed for 2011. If you have misplaced your renewal form, please contact the Secretary via email.

If you pay via internet banking, you must still send your signed and dated renewal form indicating the date of payment.

There are two entries in the NAB transaction statements that show payment for renewal/membership, but do not identify the member. If you have not yet received your 2011 membership card, please email your full name, date of payment, membership type and payment amount to the Secretary so that we can fix that up for you.

- Aldo

ANZFSS National Newsletter

The ANZFSS Executive have produced a newsletter. If you did not renew on time, you may not have received this. Please visit the ANZFSS website to download a copy of the newsletter:

www.anzfss.org.au

Branch Email Address

Our sincerest apologies for accidentally including our old email address in the correspondence details in the back of the last newsletter. The correct email address is:

nsw.anzfss@gmail.com

New Society Members

The Society extends a warm welcome to our newly ratified members:

Clare CRILLEY
Sherala GUNASEKARA
Waseem HERMIZ
Ronglian MA
Tania OSTOJIC
Kelly PEARCE
Mark PELLEGRINO

Dianne READER
Igor STEVANOVSKI
Jodie WARD



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2011 ANNUAL GENERAL MEETING NSW BRANCH of ANZFSS

Held at the University of Technology, Sydney on Wednesday 13th April 2011

MINUTES

1. Opening

The President, Ms Alison Sears, declared the 40th Annual General Meeting open at 7.15pm. Thirty one financial members of the Society and four visitors were in attendance.

2. Apologies

Apologies were received from Jim Munday, Fran Orr, Geoff Morrison & Eric Murray.

3. Presidents Report

The President's report for 2010 was tabled and summarized by the President, Alison Sears. The President also noted that the committee had ratified Mr Eric Murray as a new life member. This motion was put and carried by unanimous acclaim by this AGM. The report was accepted as an accurate record of the activities of the Branch- Moved Aldo Severino, seconded Dr. Denise Donlon.

4. Secretary's Report

4.1 Minutes from 2010 AGM

The minutes of the 2010 AGM were tabled. It was moved Dr. Phil Maynard, seconded Prof Claude Roux that the minutes be accepted as an accurate record of that meeting.

4.2 Matters Arising from the Minutes

There were no matters arising from the minutes

5. Treasurer's Report

The treasurer, Mr. Peter Jamieson, tabled and explained his report. The treasurer recommended that there be no increase in the membership subscription this year. This report was accepted on the motion of Mr Harry Albani, seconded Dr. Denise Donlon.

6. Election of 2010 Office Bearers & Committee

In accordance with the rules of the Society, nominations for the Executive of the Branch closed one week prior to the AGM. At that time the following nominations had been received.

| | |
|--------------------|--|
| President | Ms Alison Sears |
| Vice-President | Ms Shaheen Aumeer Donovan (& Newsletter Editor) |
| Secretary | Dr. Alison Beavis |
| Treasurer | Mr. Peter Jamieson |
| Membership Officer | Mr Aldo Severino |
| Committee Members | Mr. Eric Murray Mr. Aaron Heagney (Merchandise) Dr. Philip Maynard (Website Manager) Dr. Jeffrey Shi Mr. Harry Albani Mr. Paul Donkin Mr. Glenn Wilcher (Meetings Review) Ms Tania Prolov Ms Dianne Reader Ms Annalise Wrzeczycki Ms Kate Grimwood |

As no further nominations were received, the committee was accepted on the motion of Dr. James Wallman, seconded by Prof. Claude Roux.

7. Election of Public Officer

Dr. Denise Donlon agreed to stand as the Society's Public Officer and this was confirmed on the motion of Mr. Paul Donkin, seconded by Mr. Aldo Severino.

8. General Business

8.1 There was no general business

9. Close

The meeting closed at 7.40pm.



AGM 2011 - President's Report

Welcome to the 40th Annual General Meeting of the NSW Branch of the Australian and New Zealand Forensic Science Society.

The past year has been a unique one in the history of the ANZFSS, as it encompasses the tenure of two Presidents: Dr James Wallman and myself, Alison Sears. As you should all be aware, at the AGM of the ANZFSS at the Symposium in September last year, James Wallman was elected the National Secretary of the Society. This required his resignation from his position as President on the Executive of the NSW Branch, which took place prior to the Committee Meeting of the Branch in October. In the same way, Claude Roux moved from his role of NSW Vice-President to National President. At the October meeting I was elected as the new President, and Aaron Heagney elected the new Vice-President. The committee was also joined by two new members, Alison Beavis and Tania Prolov, whose contributions have been very welcome indeed. For those who may not be aware, the National Executive support all the Australian and New Zealand Branches with their branch activities and assist in planning and organising the bi-annual conferences which have been increasingly successful over the years. We are fortunate to have Claude address the meeting later this evening.

In this report I highlight some of the events of note from 2010, with input from James Wallman.

To begin with, it is pleasing to report that our membership continued to be exceptionally strong. It reached a maximum of 220 in 2010, including our six life members, and we attracted 55 new members, including a number of students. The breakdown of the 220 ordinary members was:

- ◆ 160 individual members
- ◆ 34 student members
- ◆ 26 joint members

There clearly continues to be to a strong vote of confidence in the NSW Branch by our members. I would like to also mention the committee has ratified a new life member this year, Mr Eric Murray who has been a valuable contributor to the ANZFSS branch as well as providing a regular scholarship of \$500 each year to be awarded to a forensic student for the purchase of books throughout their study. There are some flyers with details available tonight, or check the website for more details.

Branch events that occurred during the year are listed at the end of this report for your information. We thank all of our speakers throughout 2010 for taking the time to speak to us – their talks were always entertaining and enlightening. We continued to be very grateful to UTS for their support in the provision of venues throughout the year.

There were three main highlights during the year. In June, we had another of our hugely successful public nights.

This time the topic was the infamous Gonzales family murders. Our two guest speakers, Bob Gibbs and Geoff Leonard, did a splendid job of providing disturbing insights into this hideous crime.

Of course the major event of the year was the 20th International Symposium on the Forensic Sciences, held in September, in which so much time and effort from your Branch had been invested in the last few years. As everyone had hoped for, it was a sensational success, being proclaimed by outgoing National President, Bill Crick, as the best ever! We can be justifiably proud of having made a significant contribution to the development of forensic science nationally and internationally. Overall, we had:

- ◆ Over 950 delegates from 35 countries
- ◆ 70 abstracts
- ◆ 8 plenary and 34 keynote speakers
- ◆ 238 oral presentations
- ◆ 230 poster presentations
- ◆ 19 workshops

Finally, our November dinner was a memorable way to conclude such a big year in the history of the Branch. A big crowd listened with interest to Sean Doyle tell us about the fascinating world of explosives. Once again, the Clarion Hotel on the Park (previously Courtyard by Marriott) at Parramatta provided an excellent venue and dinner, and everyone enjoyed themselves.

Unfortunately my first Presidents Report is written with great sadness. The end of 2010 brought great sadness with the sudden passing of Professor Michael Dawson. Michael has long been synonymous with the ANZFSS at a National and Branch level. He was a well respected lecturer at UTS and made significant contributions to the forensic and chemistry profession. A tribute to his life and contribution to forensic science has been prepared for this Newsletter by friend and colleague, NSW Branch member Dr Alison Beavis. On behalf of the NSW Branch, I would like to offer my condolences to his wife Bronwyn, and their family. UTS has created a memorial award to support a student within the Faculty of Science Chemistry Department, in keeping with Michael's firm commitment to student support. This has been supported by his family; on behalf of all our members, and in recognition of Michael's contribution to the Forensic Sciences, the NSW branch has contributed \$200 to this fund.

It would be remiss of me to not mention the sad passing of another prominent member Dr Patricia Brennan also at the end of last year. Patricia was a strong advocate for victims of sexual assault and fought for better forensic documentation and recording of injuries related to these offences, all toward creating better reporting for these cases. We pass our condolences on to her family.



AGM 2011 - President's Report

The next few years are looking increasingly bright for the ANZFSS and the NSW branch looks forward to your continued support of the society through attending lectures and public nights held throughout the year. Of course, our branch would not be as successful without the tireless work of its committee. James Wallman and I give our sincere thanks to all of the committee members during 2010 for their hard work during the year. In particular, we thank:

- ◆ **Claude Roux and Aaron Heagney**, your Vice-Presidents, for their advice and support;
- ◆ **Paul Donkin**, the Secretary and Merchandising Officer, for his major assistance in keeping track of a stream of agendas, minutes and emails, always with good humour;
- ◆ **Peter Jamieson**, your Treasurer, for his excellent job of managing our finances;
- ◆ **Aldo Severino**, the Membership Officer, for his control of our membership base;
- ◆ **Denise Donlon**, your Public Officer, for her cheerful assistance in a variety of important ways;
- ◆ **Shaheen Aumeer-Donovan**, the Newsletter Editor, for her work on our news bulletins;

- ◆ **Phil Maynard**, our Wed Editor, for protecting and updating our important internet presence; and
- ◆ **Ali Beavis and Harry Albani** for their assistance with the catering and **Tania Prolov and Jeffrey Shi** for their assistance on the committee also.

At this AGM we note with regret the departure of one of our committee members, Dr Meiya Sutisno, due to other commitments. I would also like to say a special thank you to Paul Donkin for his tireless efforts as Secretary - Paul is stepping down from the secretary role tonight, though thankfully has still nominated to remain on the committee for the upcoming year.

Finally, I thank you, the members, for your support of, and interest in the ANZFSS. We should all look forward to another great year ahead.

Alison Sears

President

NSW Branch ANZFSS



AGM 2011 - Treasurer's Report

| ANZFSS NSW Branch Financial Statement: 1/1/2010 to 31/12/2010 | | | |
|---|---------------|------------------------|-----------|
| <i>Prepared by Peter Jamieson for the AGM on 13/4/2011</i> | | | |
| Westpac Account: 032-361 16-2167 | | \$ | |
| Balance at 1/1/2010 | 8,482.62 | \$6303.59 for 2009 | |
| Balance at 31/12/2010 | 504.08 | \$8482.62 for 2009 | |
| NAB Account: 83-480-2069 | | \$ | |
| Balance at 1/1/2010 | 8,215.00 | \$ 0.00 for 2009 | |
| Balance at 31/12/2010 | 51,056.79 | \$8215.00 for 2009 | |
| Both Accounts | | Value | \$ |
| Balance at 1/1/2010 | 16,697.62 | \$6303.59 for 2009 | |
| Balance at 31/12/2010 | 51,560.87 | \$16697.62 for 2009 | |
| Assets | | Value | |
| | | \$ | |
| Hot water Urns, 3 | 682.00 | at cost | |
| Mobile phone, 1 | 99.00 | at cost | |
| Merchandise | 200.00 | on hand (at cost, est) | |
| Total, Estimated | 981.00 | | |
| Notes: | | | |
| For the 2010 International Symposium 8 scholarships @ \$750 ea were awarded. | | | |
| The nett balance of \$51,560.87 at 31/12/2010 includes approx \$43,745 held on account of the Symposium Ctee, to be disbursed to workshop organizers. | | | |



An Excellent Opportunity for Forensic Science Students

THE ERIC MURRAY FORENSIC SCIENCE STUDENT AWARD 2011

Mr Eric Murray, our newest life time member of the NSW ANZFSS Branch has once again provided a very generous gift to the ANZFSS for the purpose of assisting students in Forensic Science. The aim of this annual award is to assist part- or full-time students in financial need.

The Committee will award the successful applicant with a voucher for \$500, to be spent at the Co-op Bookshop.

In order to qualify you must prepare a short statement, of about one page in length, explaining why this award would benefit you in your studies in Forensic Science.

Applications will be judged on merit and must be submitted for consideration by COB on the 1st July 2011. Applicants should be financial members of at least one year's standing. The decision of the Committee will be final.



*Send applications to:
The Secretary
NSW Branch ANZFSS
PO Box K208
Haymarket NSW 1240*

Next Meeting - 29th June:

Our next exciting meeting will be held on 29th June at the Australian Museum! Dr Rebecca Johnson will give us a fascinating insight into her work on Wildlife Forensics. Keep a look out for the flyer, which will be disseminated shortly.

Rebecca has a Bachelor of Science with honours in genetics from the University of Sydney and a PhD in the field of molecular evolutionary genetics from La Trobe University. She has over 16 years experience including as a Postdoctoral Research Fellow at the University of Sydney, James Cook University, Townsville and at Tufts University, Boston USA. Rebecca has been at the Australian Museum since 2003 where she has established the Museum as one of the Australian leaders in the sub-discipline of wildlife forensics. The laboratory now carries out a wide variety of DNA-based wildlife identifications for government agencies both in Australia and New Zealand including sample types such as: shark fins, bird embryos, gall bladders, seized fish meat, salted animal skin, bones, and horns to list a few. Rebecca's lab also houses a frozen tissue collection of approximately 70,000 animal tissue samples, which are held specifically for use in genetic studies. Some of these tissues are from animals that are very rare, endangered or even extinct. These samples provide an invaluable reference collection for the all research but particularly as validated reference material for wildlife forensics analyses. For more information please refer to: <http://australianmuseum.net.au/staff/rebecca-johnson>





REVIEW: “Bioterrorism: Where do we stand in terms of forensic preparedness?” by Dr Rebecca Hoile ANZFSS Meeting, Wednesday 13th April 2011

At the Annual General Meeting, members and guests were privileged to listen to Dr Rebecca Hoile, Forensic Microbiologist attached to the Forensic Science Services Branch, NSW Police Force.

Dr Hoile has been employed as a Registered Microbiologist since 2003 managing the forensic response to bioterrorism and developing protocols and procedures for suspect packages, and biological incidents, as well as CBR courses for the Police in the Australian region. Dr Hoile also works as a member of the INTERPOL Bioterrorism Preparedness Training Session across the globe.

Dr Hoile’s presentation focused on the history of bioterrorism, the role of forensic microbiology, types of threats, the microbiological characteristics of anthrax, challenges with bioterrorism investigations, and legal issues with respect to presentation and interpretation of evidence in courts specific to bioterrorism and agents. Decontamination of evidence for investigation and presentation was discussed using formalin and gamma irradiation. Finally, a review of the 2001 American anthrax attacks on the United States Postal Services and other incidents were presented.

I have expanded on some information presented by Dr Hoile.

Definitions

Forensic Microbiology

A scientific discipline with legal applications dedicated to analyzing evidence from a bioterrorism attack, bio-crime or inadvertent micro-organisms or toxin release for attribution purposes.

Biological Agent

A biological agent is a bacteria, virus, fungus or prions that can be used as a biological weapon or in bioterrorism.

Bioterrorism

The deliberate release of viruses, bacteria, and other germs (agents) used to cause illness or death in people, animals or plants, and to achieve political, social, religious, ethnic, or ideological ends with widespread panic and disruption.

CDC Categories

Dr Hoile outlined the Centre for Disease Control (CDC) categories of biological agents. The CDC categorises agents as A, B, or C.



Dr Rebecca Hoile

Type A agents are easily transmitted and disseminated with a high mortality rate and able to cause public panic and requiring public health preparedness. The Class A agents include *Tularemia*, *Anthrax*, *Smallpox*, *Botulin toxin*, *Bubonic Plague* and *Viral Haemorrhagic fevers*.

Class B agents are moderately easy to disseminate and have a low mortality and include, *Brucellosis*, Food Safety bacteria (*E Coli*, *Shigella*, *Salmonella*), *Q Fever*, *Typhus*, *Viral Encephalitis*, and *Staph enterotoxin*.

Class C agents are those that may be engineered for use in the future in bioterrorist attack. One agent listed is *Hantavirus*. Other areas include laboratory accidents, hoaxes, and anthrax in drugs like heroin.

History of Bioterrorism.

Dr Hoile provided a synopsis of the historical background of bioterrorism which I have expanded on for interest.

The history of bioterrorism has spanned eight centuries with one of the first recorded incidents being in Mesopotamia by the Assyrians who utilized rye ergot an element of the fungus *Claviceps purpurea* being mycotoxic. The Assyrians poisoned water wells with little success. A similar incident involved the Greeks using the *Hellebore* plant to contaminate water supplies that caused cardiac side effects.

Gabriel de Mussis described the Caffa incident where catapults were used by the Tartar’s to hurl dead bodies with plague at enemies. In 1754 – 1767 in the French India War Sir Jeffrey Auherst head of the British forces suggested the deliberate use of smallpox to



REVIEW: "Bioterrorism: Where do we stand in terms of forensic preparedness?" by Dr Rebecca Hoile ANZFSS Meeting, Wednesday 13th April 2011

decrease Indian populations. A subordinate officer provided Native Americans with smallpox contaminated blankets from the smallpox hospital.

The historical accounts of biological warfare demonstrated the difficulty differentiating between natural epidemics and alleged warfare attacks which Dr Hoile stated still exists today with respect to legal prosecution of such cases.

In WW1 it was alleged Germans shipped horses and cattle inoculated with diseases such as Anthrax and a *Pseudomonas* species to the United States and other countries with some agents used to infect Romanian sheep for export to Russia.

The Chinese dropped ceramic containers holding plague (*Yersinia pestis*) infested fleas on Manchuria in 1940.

In 1984 the Rajneeshee cult members sprayed salmonella on salad bars in Oregon causing several hundred incidents of food poisoning.

In 1992 the Kurdistan Workers Party a gorilla group in Turkey was credited with poisoning water supplies with cyanide.

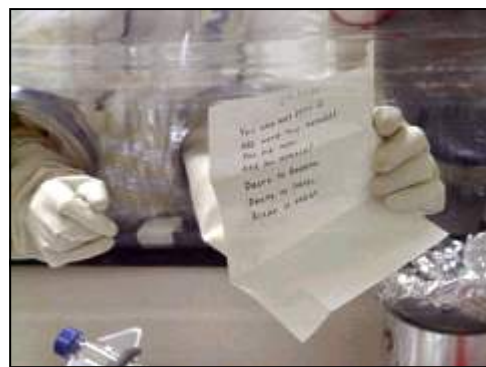
In 1995 Sarin gas was released in the Tokyo subway by the Aum Shinrikyo cult, killing 12 people. The name 'sarin' comes from the persons associated with its development being Schroder, Andros, Rudriger and van der Linde. Sarin gas is an organophosphate and like most similar agents it is colourless, odourless, tasteless and diffuses into skin. The agent is 26 times more deadly than cyanide, and has the quality of floating around at ground level for periods of time.

Dr Hoile provided a synopsis of the anthrax letters attack in the United States in 2001. From mid September to November 2001, anthrax laced letters were mailed to news media groups and to the United States Congress. A total of 22 individuals contracted cutaneous anthrax or inhalational anthrax and 5 persons were killed. The anthrax that was used was a common genetic strain treated to maximize aerolization.



Anthrax

The strain used suggested the offender/s had access to the United State Bioweapons Research facilities. The individual/s has never been identified. The cost in economic terms was significant as well as in public health terms. The cost totalled over \$1 billion for the decontamination of the Senate Offices and \$23 million for other buildings, as well as \$130 million for postal service infrastructure. Other costs were associated with investigations into future hoaxes, and the purchasing of irradiation equipment for decontamination of mail.



Examination of contaminated mail

Anthrax

Dr Hoile provided information on the bacteria Anthrax. *Bacillus anthracis* is a serious bacterial disease that forms spores, being a cell that lays dormant coming to life with the right environmental conditions and thus is very resistant to heat, light, and chemicals. In nature spores survive in soil for decades and were believed to be indestructible. Anthrax will not survive if buried less than 4 cm below the surface, with surface bacterium subject to wind, rain, heat, acidity and dessication.

There are three forms of anthrax being cutaneous (skin), inhalation (lungs), and gastrointestinal (digestive). Anthrax does not spread from one person to another but infects persons by handling products from infected animals or breathing spores from infected animal products. Eating undercooked meat from infected animals leads to gastrointestinal anthrax. The incubation period is 2 to 6 days.

The symptoms of anthrax are different depending on the type of disease. Inhalation anthrax produces cold or flulike symptoms, and includes sore throats, fever, and muscle pains. Later symptoms include cough, chest discomfort, dyspnea, and tiredness. Cutaneous anthrax leads to small sores that develop into blisters



REVIEW: “Bioterrorism: Where do we stand in terms of forensic preparedness?” by Dr Rebecca Hoile ANZFSS Meeting, Wednesday 13th April 2011

that form into an ulcer with a black centre. Gastrointestinal symptoms include nausea, loss of appetite, bloody diarrhoea and fever.

The CDC recommends treatment for anthrax with antibiotics, usually over a 60 day period, such as ciprofloxacin or doxycycline and a 3 dose regimen of anthrax vaccine. The anthrax vaccine is not available for administration to the general public.

Dr Hoile described the ‘anthrax belt’ in NSW or the stock route belt. In Australia anthrax is a notifiable disease under the Stock Disease Act. Dr Hoile described incidents of the disease being confined to the disease “belt” which runs through the centre of NSW and into Victoria. The belt actually lies between Bourke and Moree in the north to Albury and Deniliquin in the South.

Investigative Challenges

Dr Hoile discussed challenges to a biological event including that attacks would likely be covert, with agents being colourless, odourless and tasteless as was the case with the Sarin gas attack. There is usually no immediate effect on the body without a ‘signature’ to indicate a presence.

Materials for bioterrorism manufacture are cheap to obtain, and produced crudely.

In the age of the internet with information and equipment availability on the net, in addition to universities, laboratories and businesses acting as shop fronts

for sale of ‘second hand’ laboratory equipment, the manufacture of biological agents in a clandestine fashion is realistic.

Dr Hoile outlined the outcomes for the NSW Police Force with chemical, biological and radiation (CBR) controls being:

- ◆ Biological supply procedures accepted as best practice by INTERPOL and distributed worldwide in 188 countries and 4 different languages.
- ◆ An update of CBR NSW Crime Scene Courses and responsive procedures, internationalization of concepts and practices.
- ◆ Delivery of relevant classified information, international collaboration and relationships with CBR colleagues.
- ◆ Ability to develop CBR training for Specialist Police.

Eight Years on, the NSW Police have accredited PC 3 laboratories and field response, with abilities to collect and decontaminate evidence. They also have the only CBR Crime Scene course in Australia with NSW capability for bioterrorism seen as international best practice. Future projects outlined by Dr Hoile includes a Supervising Masters project at Sydney University, the development of sampling techniques for biologically contaminated crime scenes and research on the effectiveness of HAZMAT decontamination in biologically contaminated crime scenes.

Investigative challenges in bioterrorism attacks include the processing of contaminated evidence and crime scenes with collection and analysis of evidence, identification of the agents, decontamination of sites and evidence and interpretation of test results. In addition, there is the capacity for there being a prolonged investigation, as well as joint Public Health and Law Enforcement Agency investigations. Forensic microbiological investigations demand careful controls and standards for validation of technologies and data appropriate for legal application. Interpretation of evidence is an issue with defense questions in court. Evidence from a crime scene can be varied and retrieving the evidence can usually be completed at the crime scene. Investigating a bioterrorism event will result in the collection of data from electronic devices such as computers and mobile phones

Difficulties with collecting evidence arise in situations with the release of a biological agent such as Anthrax contaminating the evidence. Contaminated evidence must be processed with methods that will



Anthrax symptoms



REVIEW: "Bioterrorism: Where do we stand in terms of forensic preparedness?" by Dr Rebecca Hoile ANZFSS Meeting, Wednesday 13th April 2011

preserve the evidence and prevent spread of the contaminating agent. Retrieval of evidence from seized contaminated articles is important to investigatory agencies and the collection of intelligence.

Agents like Anthrax have biological spores that are resistant and retain the ability to cause disease and death on exposure. In these circumstances it is difficult to process a crime scene contaminated with Anthrax due to the type of personal protective equipment that must be worn and the necessity to remove and decontaminate evidence before proceeding to analysis. Decontamination may have an adverse effect on the integrity and viability of the evidence for retrieval and subsequent use.

Two types of decontamination are gamma irradiation and formaldehyde. Dr Hoile has conducted research into these decontamination processes and the effect on data recovery from electronic devices. With respect to characteristics and properties of electronic devices and data on hard drives, decontamination with formaldehyde did not appear to affect sensitive electronic circuitry. Post decontamination there was no detrimental effect on data or recovery of data. No adverse effects were found with electronic data including phone numbers, text messages, and call registers recovered from the phones and SIM cards with all electronic data recovered from the flash drives.

In the research studying the effect of gamma irradiation for decontamination and recovery of evidence, data including photos, word documents and presentations, were placed onto electronic devices. Damage to certain areas of data was evident with files readable and specialist recovery of data achieved. At doses of irradiation between 250 Gy and 500 Gy the computer drives spin up and are detected by Windows XP with files readable and all data detected. Mobile phones exposed to gamma irradiation are affected by low levels with batteries damaged at 250 Gy with irreversible damage at 1500 Gy. Below 1000 Gy data on mobile SIM cards could be retrieved. Electronic evidence could be retrieved from all items exposed to 250 Gy or less.

Dr Hoile's research demonstrated that while gamma irradiation is an effective bacterial decontaminant the retrieval of data from electronic equipment was not possible at the levels required to ensure an effective decimal spore reduction.

Formaldehyde gas has provided an effective means of viable spore reduction allowing the retrieval of electronic evidence and therefore would be the decontaminant of choice for data recovery of evidentiary concern. Dr Hoile did experiments on paper, glass, and firearms as well using formaldehyde gas and gamma irradiation to try and kill spores, and see if the process had effected both the fingerprint recovery, data recovery, DNA (paper only) and toolmark recovery. Dr Hoile developed a formaldehyde formulation enabling the recovery of everything except DNA, with some detrimental effect on recovery of fingerprints from paper. Gamma irradiation at the doses required to kill spores was not detrimental to any of the evidence that was recovered.

An interesting and entertaining presentation by Dr Hoile.

References

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4. Phillips M. Bioterrorism: A Brief History. Department of internal medicine Mayo Clinic.
5. www.johnstonsarchive.net/terrorism/anthrax.html

Review by Glenn Wilcher

MCHUMOR.COM by T. McCracken



"Cleaning goes against entropy and the natural order."

© T. McCracken mchumor.com



IDIOM INVESTIGATION: Breaking Down the Lingo

By Annalise Wrzeczycki

Thought YOU were a **unique character**? Remember enjoying a bowl of **intaglio** in Rome? Applauded Cate **Planchette**'s latest Hollywood role? Think you may have **ESP**? Seen a **Dandy Roll** exhibition? Visited the Zoo's **wet seal**? Saw **trash marks** at your local tip? Picked up a chemists' cream for that nasty **OVI**? Or prepared your **rainbow colouring drag lines** for Mardi Gras? Your kind friends may not correct you...but Annalise Wrzeczycki from the NSW Police Document Examination Section shines some light on some interesting "Doco" terminology so you don't make those word-play mistakes!

Anti-Stokes ink:

Security ink containing a component that fluoresces in the visible band of the spectrum when illuminated by infrared light with a wavelength around 900 nm.



Counterfeit:

An entirely unauthorised copy or reproduction of an authentic security document.

Dandy Roll:

A cylinder covered in woven wire that rolls across the mat of fibres in the papermaking process. It may have raised or recessed design affixed to the wire cover to mark each passing sheet and create a watermark.

Drag line:

A very thin ink stroke where the writer intended to raise the pen. Can be used to show the direction of the pen and can also be called a hairline stroke.

Eyelet:

A small oval or loop formation that is part of a cursive or handwritten letter e.g. the top of the letter 'e'. The term eyelet can also be used to describe small, circular metal rivets used to attach a photograph in a passport.

Fugitive ink:

A type of soluble ink which causes specific parts of the security printing to disappear or bleach when exposed to solvents.

Intaglio printing:

Printing technique whereby the image to be printed is etched or engraved in the surface of a printing plate. First, a thick and highly pigmented ink is applied to the printing plate, then the non-printing (non-recessed) areas of the surface are wiped clear of ink. Finally, the ink that remains in the engraved parts of the printing plate (the image to be printed) is transferred to the substrate under high pressure. The pressure forces the substrate into the recessed areas of the printing plate, thereby producing a raised tactile relief which can be recognised under oblique light.

Microprint / ESP:

Lines or motifs made up of Extra Small Print (letters or numbers) that are barely perceptible to the naked eye; in documents they often form the guidelines for writing. Basic methods of reproduction often do not allow detailed microprinting. Therefore, forged documents will often show unreadable microprint.

Needle printing:

A needle printer or dot-matrix printer is a type of computer printer which prints by impact, striking an ink-soaked cloth ribbon against the substrate, much like a typewriter. Unlike a typewriter, letters are drawn out of a dot matrix and thus variable fonts can be produced.

OVI (Optically Variable Ink):

Printing ink containing optically variable pigments which show various colour shifts depending on the angle of observation or lighting. OVI's consist of multi-layered micro flakes in a transparent ink medium. The pigment flakes are microscopic waveband-selecting optical devices (interference filters).

Planchettes:

Small coloured discs randomly incorporated into the substrate during manufacture and often difficult to see with the naked eye. Planchettes can also be metallic or transparent; they may fluoresce under UV light and are commonly found in the paper substrate of passports.



*Crazy tattoo...
... or Fugitive ink?*



IDIOM INVESTIGATION: Breaking Down the Lingo

By Annalise Wrzeczycki

Fantasy document:

Fantasy documents bear the names of imaginary states, or of an organisation where in fact the issuer is neither a state recognised under international law, nor an authorised institution; e.g. Texas Passport, Republik Hakuna Matata, Gondwanaland Drivers Licence, etc.

Rainbow Colouring / Printing:

Also called split duct printing. This colouring process used in offset printing is used to protect security documents against colour separation or copying, by subtly merging colours into each other resulting in a gradual colour change of a printed line e.g. a line in the background pattern of a passport.

See Through register:

Designs/motifs seemingly printed at random on the front and back of the substrate, but which match up perfectly or form a complete motif when viewed by transmitted light. Have a closer look at our Aussie \$5 banknote and see if you can spot the see through register.

Trash Marks:

Marks appearing on a photocopy, fax copy or computer-printed document that do not originate from the original document, but result from debris or a defect in the image processing or printing mechanism. These marks have identifying value.

Unique character:

Not one of the standard fonts or typefaces.

Wet Seal / Wet Stamp:

An inked impression produced when an inked relief surface is pressed against the substrate. Often referred to as a "rubber stamp impression".



Now THAT is a trash mark, people!

Contact Details

If you have any query, comment or suggestion about this newsletter or any information contained within, please do not hesitate to contact us. *All correspondence regarding general enquiries, membership renewal, payment etc, can be addressed to:*

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Specific recipients (eg. the President, Treasurer, Membership Officer, etc.) can be reached C/o the details above.

Website: <http://www.anzfss.org.au/nsw>

Final Words:

"The drops of rain make a hole in the stone not by violence but by oft falling"
Lucretius

Your Committee:

| | |
|-------------------------------------|----------------------------------|
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| Vice President / Newsletter: | Shaheen Aumeer-Donovan |
| Treasurer: | Peter Jamieson |
| Secretary: | Alison Beavis / Kate Grimwood |
| Memberships: | Aldo Severino |
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| Merchandise | Aaron Heagney |
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