



Australian and New Zealand FORENSIC SCIENCE SOCIETY



June 2005
Issue 13

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Please find enclosed the
Minutes from the
2005 ANZFSS
National Council Meeting

NSW Branch Newsletter

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

ANZFSS National Council Meeting

As you have heard in previous newsletters, the ANZFSS National Council Meeting was held on the 21 - 22 April this year at the Queensland Police Headquarters, Brisbane. Our representatives for the NSW Branch were Kirsty McAllister and Eric Murray. Eric had the following to say about the meeting:

"Recently whilst in the 'perfect state' I attended as a delegate for the NSW Branch and met some folks from many and varied areas of forensic work who came from all states plus Tasmania and New Zealand. The 14 delegates enthusiastically discussed many items including the Rules of the Association, the Registered Forensic Practitioners' Scheme, and nominations for the Adelaide Medal (our nomination was Allan Hodda). It was a pleasure to attend, and particularly to witness Kirsty representing our branch in a very admirable and professional manner."

The minutes from this meeting are enclosed with the newsletter for your perusal. Not mentioned in the minutes are the reactions from the other delegates when Kirsty presented a summary of the activities of our branch. No other branch is able to organise a talk every month for the society including two public nights per year, and no other branch has a newsletter quite like ours! This is testament to the spirit of cooperation and collaboration that the NSW Branch has developed, and the hard work done by its Committee. Well done guys!

Welcome to New Society Members

The NSW Branch extends a warm welcome to our newly ratified members:

Louise COBB
Andrew MARTINS
Marcus ROBINSON



Membership Card Competition

Just a reminder to send us your entries for the 2006 membership card competition as you could win an ANZFSS T-shirt. The competition closes on 31st August. For more information consult previous newsletters or contact the Editor.



Message from the President

Dear ANZFSS members,

Guilty of smuggling 4.1 kg of cannabis and sentenced to 20 years in jail: I am of course talking about the Schappelle Corby case. The verdict prompted a real media frenzy and strong public opinion in favour of the accused. Commentators and the general public went on to criticise the Police and the Indonesian justice system, including the judge. I agree it is very sad to see a young individual in such difficult circumstances. But let's face it, History tells us that emotion and news-driven cases do not mix well with the administration of justice, be in Australia or overseas.

I might be biased but it is obvious that Forensic Science plays a crucial role in discerning objective (physical) from testimonial evidence to eventually support some of the propositions put forward in a criminal case. In the Corby case, ideally, the following forensic avenues could have been explored:

- Detection and examination of fingerprints on (and inside) the bag containing the cannabis.
- The same for trace DNA.
- Profiling of the cannabis found in the bag.
- Profiling of the packaging material containing the drug.



Schappelle Corby
(photograph from her website
www.schappellecorby.com.au)

- Detection and examination of potential associative evidence that could link the bag and the drug to the actual offender and his or her environment (eg. hairs).

Such avenues, combined with other information obtained from airport security and baggage check-in and handling procedures would have provided crucial evidence.

Now, it appears that none of this exists. Even if some of these examinations were undertaken today, the results would be much less meaningful than if they had been carried out at the beginning of the case. The potential existed at the early stages of the case to avoid the current situation leading to all sorts of interpretation.

This is another lesson of this case: forensic evidence can be very powerful, but it cannot be an after-thought. We must not forget the principle 'GIFT (get it first time) or forget it'.

Prof. Claude Roux
President
1st June, 2005



Request for Information

The following letter was forwarded to us, requesting some research assistance:

"Does anyone have any case histories on fires in Youth Hostels, either accidental or deliberate any where in the world, that I can borrow and research for some voluntary work I am doing for the YHA in UK. Details and photographs in electronic format would be best (ensuring copyright is not infringed)" - Mr P.J. Sandel

Mr Sandel's address and contact details can be found on the IAAI website:

<http://www.firearson.com/>

If there are problems with this website, you can email Inspector Ross Brogan with the information:

Ross.Brogan@fire.nsw.gov.au

Thank you for your assistance.



New Committee Member Profile: Aaron Heagney - Chemist

Aaron Heagney is a Chemist at the Australian Forensic Drug Laboratory (AFDL) at the National Measurement Institute (NMI). NMI is a relatively new organisation that comprises of the former AGAL, the National Measurement Laboratory at Lindfield, and the National Standards Commission. He has been working there since graduating from the University of New England with a B.Sc. (Advanced) in 2001. Aaron's current role has him working as part of the Australian Illicit Drug Intelligence Project (AIDIP), a joint project between NMI and the AFP. Over the past four years at AGAL and NMI Aaron has worked in a number of different roles in the drugs section, including clandestine laboratory field work and analysis.



Aaron Heagney

In his spare time Aaron is a member of the Rotaract Club of Ryde, a community service organisation for 18-30 year olds, where he has held almost every board position, and has just finished 12 months as the District Representative, a role which had him leading 8 different clubs across Northern Sydney and the Central Coast. Aaron also enjoys dancing, rock climbing, and cycling. Aaron is also a Star Wars and Monty Python fan. Aaron is married to Emma, a forensic biologist in the DNA laboratory at DAL.

We extend a warm welcome to our new Committee Member and look forward to working with you.

Updated Calendar for 2005 NSW Branch Meetings

A few of the meeting dates for the second half of this year have changed. Our August meeting has been moved earlier in the month because of the large representation from Australia at the Hong Kong IAFS Conference. Our September meeting has been moved to a Friday to suit the

Public Forum format of the evening. The November meeting has been moved to the Friday, which is more suitable for a dinner.

Please note that unless confirmed in the newsletter, these dates are still **tentative**.

Please change these dates in your diary:

Wednesday, 22nd June	David Pearson "Explosion Investigation" (see Page 4)
Saturday, 16th July	Inside the Forensic World (see Page 4)
Wednesday, 17th August	(Tentatively) Jill Fogarty (Forensic Podiatry)
Friday, 30th September	Peter Fox (Public Forum)
Wednesday, 26th October	Derek Hinds (Falconbridge Murders / Cot Deaths)
Friday, 25th November	Peter Ellis + Dinner in Parramatta

We look forward to seeing you there!





NEXT MEETING: "Explosion Investigation" by David Pearson

DATE: Wednesday, 22nd June 2005
TIME: 6:30 for light refreshments, 7:00pm start
VENUE: Department of Forensic Medicine,
50 Parramatta Road, Glebe
COST: Free to members, \$5 for non-members

David started his professional career in the Pharmaceutical Industry where he rose from an Analytical Chemist to the position of Laboratory Manager. He then pursued a career in state and federal analytical laboratories in the fields of analytical methods development, research and forensic toxicology. For the last 15 years he has been working for WorkCover NSW at their TestSafe Facility in Londonderry NSW in the field of Fire & Explosions related research, testing, and specialist industrial accident investigations. He currently heads the Fire & Explosion Unit and has been involved in the investigation of most of the major industrial explosions that have occurred in NSW over the last 15 years.

David holds qualifications in Chemistry including a Chemistry Certificate and a Bachelor of Science (Applied Chemistry). He also holds a Graduate Diploma in Public Sector Management, and is currently undertaking a Masters in Fire & Explosion Industrial Safety Management at the University of NSW.

An explosion is an event, which leads to a very rapid build up of pressure. It may involve a physical or chemical change resulting in the sudden, violent release of energy.



Heat, light, gaseous products and shock waves, or combinations of these, can be produced. The initial conditions, or reactants, affect both the magnitude and duration of the explosion overpressures. The overpressure histories affect the nature and distribution of physical damage.

Explosions are often dramatic and terrifying events.

Although some explosions share the same preconditions as fires, and may also produce similar levels of overall damage, the timescales involved in explosions are so short that there is usually no time to evacuate persons in danger, take actions in order to mitigate the explosion or to allow for emergency responders to attend.

Explosions that result from a chemical reaction can be categorised by their propagation speeds. If the reactants propagate or react faster than the speed of sound, then this is referred to as a detonation. If the reaction occurs less than the speed of sound then it is referred to a deflagration. Typically commercial explosives detonate, and are usually in the solid or liquid state, whereas flammable gases, vapours and dusts usually deflagrate. A detonation will display evidence of intense localised pressures at the point of origin, which could include a crater (if at ground level), shattered structures and shrapnel projected to some distance. The pressure, and hence damage, rapidly reduces at distances away from the origin. However, a deflagration will exhibit no clear origin and will tend to cause whole walls to fail, is less highly directional, and there will be no shattered projectiles.

Although the extent of damage and apparent chaos caused by the explosion can at first be daunting, the pattern of damage provides vital information to the forensic investigator. The examination of an explosion scene should start at the limit of damage and move slowly inwards towards the origin(s), recording detailed written observations, sketches, videos and making as many photographs as are needed in order to allow detailed and complete study and analysis of the scene when returning to the Laboratory. Physical evidence obtained for the scene can provide valuable information and can be subjected to a range of forensic techniques. When all of the evidence is considered along with witness statements, and specialist knowledge, then an expert opinion be formed which may be of assistance to the Coroner or the Industrial Relations Courts.

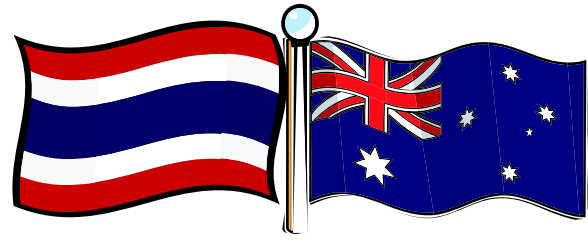
JULY MEETING: Inside the Forensic World Public Forum



DATE: Saturday 16th July, 2005
TIME: 9:00am - 4:00pm
VENUE: University of Technology, Sydney
COST: \$30 per person



REVIEW: "DVI In Thailand - An Australian Perspective of the Boxing Day Tsunami" by Sergeant Phil Pearce ANZFSS Meeting, 25th May 2005



Sergeant Pearce has been a member of the NSW Police for 21 years. He began his career in General Duties at Hornsby. He has worked with Police Rescue at Pennant Hills, Education Services at Driver Training in St Ives and moved to Forensic Services in 1990. He worked at Chatswood Crime Scene from 1990 to 2001 and has been with the Forensic Services training unit since 2001. He is now a Team Leader in the Forensic Services Training Section.

Sergeant Pearce has been involved in many homicides. He was heavily involved with the murder of Dr Victor Chang. Other high profile cases he has worked on include the Gulgong fire, Thredbo, the Berowra sea plane disaster, the Bali bombings and the recent south east Asian Tsunami disaster.

Sgt Pearce opened his presentation with a mention of the 1961 *Vickers Viscount* airplane crash in Sydney. He comments that Sgt Barney Ross, the Disaster Victim Identification (DVI) organiser at the time, developed a system that allowed people from all over the world to come together in a disaster situation and know immediately what they were doing. This system was subsequently adopted by INTERPOL and is still the basis of the system used today.

The Asian Tsunami was produced by a 1,000km fault shifting vertically by 10m, causing tonnes of water to displace at an alarming rate. Sgt Pearce was urgently called to participate in Operation Cawdor immediately following the call to Australia for assistance. He set the scene by sharing an anecdote about rushing from Parramatta to Canberra in 2½ hours without getting booked for speeding... One can hardly imagine the devastation produced by such an event. In fact, early estimates were that the death toll would be in the vicinity of 12,000 people. To-date, that estimate has been revised to over 310,000.

Sgt Pearce has much praise for the early manage-

ment conducted by the Australian Federal Police (AFP). They needed to decide on an appropriate response, where to respond, when was the right time, and what resources to send. Australia made offers to the affected countries that the AFP would manage the assignment and provide the appropriate expertise. The Kingdom of Thailand immediately responded to the offer, and Indonesia made a limited acceptance. Rather than "throwing everything at the problem", the AFP was careful to send the right people at the right time. This was mission-dependant but for DVI, it generally involved experienced forensic investigators, pathologists and odontologists, followed later by junior members of staff so that they could be trained for future disasters. The Australian response was rapid, and Sgt Pearce asked us to consider the distance between Australia and Thailand. Everything sent to Thailand had to be carefully planned to avoid wasteful trips. Specialists from ACT, VIC & NSW were transported by RAAF and commercial aircraft.

International relations also had to be a priority. The Thai people are used to being communicated to in a polite manner and respond well to suggestion rather than dictation (as other countries found out the hard way).

Sgt Pearce showed us photographs from his first day in Cowlac. This first day was dedicated to establishing the mission, deciding on the direction of deployment, and commencing high-level talks with the Palace, ambassadors and the Thai government. The power of water was evident in the photographs. Cars piled on top of each other, contaminated drinking water, and many bodies wrapped in plastic. This plastic wrapping was to aid in transportation of the bodies, but also accelerated decomposition.

Continued on Page 6...



REVIEW: "DVI In Thailand - An Australian Perspective of the Boxing Day Tsunami" by Sergeant Phil Pearce ... Continued from Page 5

ANZFSS Meeting, 25th May 2005

The main mistake from the DVI team on day 1 was the use of heavy black vinyl aprons. In the Thailand heat, this caused overheating and dehydration. So these aprons were discarded to ensure the safety of the teams and assist with their endurance.

The mortuary was developed in 3 days, and Sgt Pearce has very high praise for those involved in this project. The spirit of camaraderie was evident even in the Standard Operating Procedures being written in both English and Thai.

The immediate considerations following the response was the mission, language (translation), authority (diplomacy as Australia has no authority in Thailand), finance, resources, OH&S, transport, and the welfare of the experts. Other considerations were the supply line, SOPs for international teams (developed by the Australians), the paper trail and communications. Also, the DVI standard needed to be maintained. Fingerprints, dental and DNA evidence are all primary levels of identification, and a board was set up to decide whether the standard for identification

had been met, before it was accepted.

Sgt Pearce was very impressed with the AFP's administration capabilities. They brought everything from vans and laptops to paper and sunscreen. The Australian workers were very well looked after. They stayed at the Hilton, and had a designated laptop to communicate with home. These are very important things when dealing with such a tragedy.

In summary, the job continues. The event is no longer sensational for the Western press. The tragedy continues - there are still people without houses or a means of a livelihood. Australia is committed to provide support until the job is finished, and this means a lot of personnel and money.

Overall, Sgt Pearce is very positive about his experience, and was very impressed with the response from Australia and the rest of the world. We would like to thank him for sharing with us his personal experiences during the Asian Tsunami disaster.

Call for Papers

18th International Symposium on the Forensic Sciences
Forensic Science: Classroom to Courtroom
2 - 7 April 2006, Esplanade Hotel Fremantle, Western Australia



The 18th International Symposium on the Forensic Sciences is to be held in Fremantle, Western Australia from 2 to 7 April 2006 at the Esplanade Hotel Fremantle. The conference theme, **Forensic Science: Classroom to Courtroom** will be lead by a number of International guests from United Kingdom, Canada, USA, and Singapore, as well as a number of highly respected speakers from Australia and New Zealand.

The **CALL FOR ABSTRACTS** is now available for those wishing to present a short paper for oral or poster presentations. Go to www.anzfs2006.org.au to submit your abstract online. Abstract submissions are due by **1 November 2005**. You will notified about your abstract by 1 December 2005. Registration information and a 'Webhot' special will be available on the website in June. The deadline for the Web hot special registration fee is 19 August 2005.

For further information on the 'Call for Abstracts' and updates on the Symposium, please go to:
www.anzfs2006.org.au

We look forward to seeing you in Fremantle in 2006.

Organising Committee
18th International Symposium on the Forensic Sciences



IDIOM INVESTIGATION: Breaking Down the Lingo

By Donnah Day

Ever had trouble understanding a forensic scientist, police officer or lawyer? Never fear! Donnah is here to analyse the jargon for us.

EXPLOSIVES:

There are two broad classes of explosives:

1. *deflagrating*
2. *detonating*

Deflagrating explosives - include gunpowder, cartridge propellents, pyrotechnic compositions and similar materials. These substances behave differently according to whether or not they are in a container. When ignited in the open, intense heat is produced but there is normally no explosion. If, however, they are ignited in a closed container the pressure rises owing to the production of hot gases. This pressure rise, in turn, causes an increased rate of chemical reaction and so an accelerating reaction is produced. As a result an explosion occurs. Deflagrating explosives are used in applications where a comparatively slow pushing action is required, such as in weapon cartridges and rockets or in pyrotechnics where the effects desired are heat, light, etc but where blast effects are to be avoided.

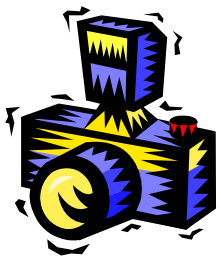


Detonating explosives - include military high explosives such as TNT and industrial blasting explosives such as gelignite. In small quantities these explosives will burn quietly if ignited. If however they are initiated by a powerful shock, a detonation is induced. This consists of a supersonic shock wave which travels through the explosive causing it to explode. The energy of the explosion reinforces the shock wave which thus becomes self sustaining. Once initiated, this type of explosive will, in general, sustain the detonation whether confined or not. Detonating explosives are used in applications where shattering effects are required, such as blasting operations and for the filling of military shells and bombs.



PHOTOGRAPHY:

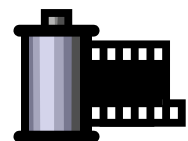
Aperture – the amount of light admitted by most lenses may be varied by opening or closing-down an adjustable diaphragm, creating a lens opening, or **aperture**, of varying diameter. As the diaphragm is closed down the aperture is made smaller. This reduces the amount of light being passed by the lens and the *f* number becomes higher. This also increases the depth of field.



Lens Speed - The speed of a particular lens is expressed numerically by dividing its focal length by the largest diameter of aperture at which the lens can be used. The lower the quotient (the *f* number), the faster the rated speed of the lens.

***f*-stop** – the successive *f* numbers inscribed on the lens are usually a series of standard numbers known as “full stops”. Each one indicates an aperture that admits half as much light as the previous marked lens opening.

Film speed – the speed of a film relates to its graininess. A low ISO film such as 100 ISO is finer than a high ISO film such as 400 ISO which is much coarser. Enlargements from low ISO films retain clarity better than high ISO films. Pictures enlarged from high ISO film negatives have a grainy appearance. Pictures enlarged from low ISO film negatives can be enlarged much more before they begin to appear grainy.



Expert contributions are gladly accepted - Please send your definitions to the Editor



Reminder of NSW AFI Conference



Electrical Fires - The Shocking Truth: The Investigations of Appliance & Electrical Fires

DATE: 18th - 19th August 2005

VENUE: Carlton Crest, Sydney

One for the Fireys

This photograph shows a red Doberman kissing an exhausted fireman ...

He had just saved her from a fire in her house, rescuing her by carrying her out of the house into her front yard, while he continued to fight the fire. She is pregnant. The firefighter was afraid of her at first, because he had never been around a Doberman before. When he finally got done putting the fire out, he sat down to catch his breath and rest. A photographer from the Charlotte, North Carolina newspaper, "The Observer," noticed this red Doberman in the distance looking at the fireman. He saw her walking straight toward the fireman and wondered what she was going to do. As he raised his camera, she came up to the tired man who had saved her life and the lives of her babies, and kissed him, when the photographer snapped this photograph.



Newsletter by Email

If you would like to receive the newsletter by email, please send me an email indicating your name, membership number, and the recipient email address. shaheen.aumeer@uts.edu.au

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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Website:

<http://www.nifs.com.au/ANZFSS/ANZFSS.html?Index.asp&1>

Your Committee:

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	Meiya Sutisno
	James Wallman
	Ian White

Final Words:

"I love deadlines. I like the whooshing sound they make as they fly by"
Douglas Adams (1952 - 2001)