



Dr Laurance John Donnelly

BSc (Hons), PhD, CGeol, CSci, EurGeol, FGS, FGSA

Listed as an Expert Adviser (Forensic Geologist) with the UK National Crime Agency

CHAIR, IUGS INITIATIVE ON FORENSIC GEOLOGY

FORENSIC GEOLOGY & POLICE SEARCH

MINERAL EXPLORATION & MINING GEOLOGY

ENGINEERING GEOLOGY & GEOHAZARDS

Mbl: 00 44 (0)7970 038 236

Email: geologist@hotmail.co.uk

IUGS-IFG Overview

From 2011 to 2016, IUGS-IFG organised, procured, managed and delivered approximately 170 events throughout the world. Generally, every two weeks somewhere in the world there was a forensic geology event held. These varied considerably from short focus meetings and presentations to the delivery of training or operational support lasting several days. A IUGS Ad Hoc Review Committee (ARC) was convened to review the progress of IFG. This mandatory review was held on 4th April 2016, in Manchester, UK, under the Chairmanship of Prof Jose Calvo, Secretary General of IUGS. ARC concluded that during the period 2011-2016 IFG has met and exceeded its objectives. IUGS, via IFG, has provided the opportunity for the development and advancement of forensic geology throughout the world. This has resulted in this multidisciplinary science being firmly established in the geology profession, policing and law enforcement. Conventionally, IUGS-IFG event are categorised as; outreach, knowledge exchange and capacity building or training.

Outreach

The aim of outreach is to draw attention to forensic geology. IUGS-IFG has engaged with a variety of stakeholders, this has included: police forces, law enforcement organisations, geological surveys, professional geological bodies, government departments, non-government organisations, co-professional and consultants. Both forensics science and geology seems to have gripped the imagination of the public and as a result have benefited by positive media and film attention in recent years. As such, IUGS-IFG committee members have carried out selected engagement with the media including TV, radio, and documentary entertainment programs, and crime fiction writers.

Public engagement and working closely with schools, colleges and universities are important to IUGS-IFG. General presentations on forensic geology have been provided for primary school children (aged 7 to 11). More scientific based presentations and some case work have been delivered to high school children (aged 11 to 16). In 2013, the International School Science Fair, held in Cornwall, England, IUGS-IFG was involved in setting up a simulated crime scene. School children dressed in protective crime scene suits were able to conduct ground searches for (fake) nail bombs and weapons. They subsequently collected soils samples from a vehicle, spade and clothing and the analysis of these soils provided geological evidence enabled them to help solve a fabricated crime.

More detailed presentations have been given to university students at BSc and MSc level. IUGS-IFG have collaborated with PhD research students in both geological (trace) evidence and ground searches for burials. This has included the analysis of soils, leachate plumes and volatile organic compounds associated with human decomposition. This is based on case work and observations at the Department of Forensic Anthropology, University of Tennessee, Knoxville, Tennessee, USA. IUGS-IFG has also provided ideas for collaboration at Australian Facility for Taphonomic Experimental Research (AFTER). This facility is the first of its kind in Australia, and the only facility outside of the USA, that allows the donation of cadavers to study the process of human decomposition in a natural environment. Such facilities, often colloquially are referred to as, 'body farms'.

Chair

Dr Laurance Donnelly

T: + 44 (0) 7970 038 236

E: geologist@hotmail.co.uk

Vice Chair

Dr Rob Fitzpatrick

T: +61-8-8303 8511

E: rob.fitzpatrick@csiro.au

Treasurer

Prof Lorna Dawson, CBE

T: +44 (0) 1224 395 328

E: Lorna.Dawson@hutton.ac.uk

Secretary

Ms Marianne Stam

E: marianne.stam@doj.ca.gov

Knowledge Exchange and Capacity Building

The aim of knowledge exchange and capacity building is to provide data, information, operational case work, best practice, methods, awareness, techniques and strategies with a small focus group. This 'teaching' is provided to team leads, who seek to introduce forensic geology or improve the applications of forensic geology within their respective organisation. Knowledge exchange and capacity building events have been organized and delivered by IUGS-IFG in collaboration the several internal federal police forces including the first event of its kind in Russia. A soil forensics and forensic geology knowledge transfer event was organised by the IUGS-IFG and took place in Moscow, in 2013. This was the first international event of its kind to be hosted in Russia and the Commonwealth of Independent States (CIS) to specifically focus on soil forensics and forensic geology. It was attended by the Ministry of the Interior of Russia, the Police Service, Investigative Committee of Russia, Federal Drug Control Service of Russia and the Federal Security Service of Russia. Delegates were invited from Armenia, Australia, Azerbaijan, Belarus, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Netherlands, Northern Ireland, UK, Ukraine and USA.

Training

IUGS-IFG provides a bespoke team comprising of 4 to 6 internationally recognised experts specially to deliver a focused trained programme. These usually comprise a series of formal lectures followed by practical session. When required, advanced forensic geology training courses have been provided. Training has been provided for organisations that include the following.

- Underwater search in the Netherlands;
- Forensic geology for the Servicio de Criminalística of Guardia Civil, Madrid, Spain;
- Several UK Police forces, including the National Crime Agency (formerly Serious Organised Crime Agency (SOCA) and National Policing Improvement Agency (NPIA));
- Forensic geology and missing persons searches, Federal Police & University Nacional, Bogota, Colombia;
- Ground searches, Australian Federal Police (AFP), Victoria Police, Brisbane & Victoria, Australia;
- Geological trace evidence, Russian Federal Centre of Forensic Science, Ministry of Justice, Moscow, Russia;
- Heavy Mineral School, University of Milan, Italy;
- Searches for burials, Brazilian Federal Police, Brazil;
- Forensic geology, land searches and marine searches, Forensic Geology Group, Abu Dhabi Police, UAE; and
- Ground search and trace evidence, Polizia & Carabinieri, Sicily, Italy.

Police Operational Case Support

IUGS-IFG committee members have been invited to become registered with police for the provision of forensic geology services. Although this was not one of the original incentives for setting up the group, the unique experiences within IUGS-IFG has played an important and made significant contributions to a number of high profile criminal investigations around the world.

Source: Extract from Donnelly, L. J. 2017. Special Guest Editor. Forensic Geology Themed Issued. Episodes. Journal of the International Union of Geological Sciences, June 2017.

Chair**Dr Laurance Donnelly**

T: + 44 (0) 7970 038 236

E: geologist@hotmail.co.uk

Vice Chair**Dr Rob Fitzpatrick**

T. +61-8-8303 8511

E: rob.fitzpatrick@csiro.au

Treasurer**Prof Lorna Dawson, CBE**

T:+44 (0) 1224 395 328

E: Lorna.Dawson@hutton.ac.uk

Secretary**Ms Marianne Stam**

E: marianne.stam@doj.ca.gov