Introduction to Forensic Science and Geology

Ritsuko Sugita (NRIPS)

Forensic geology is an application of geology and a part of forensic science that contributes to help investigating crimes and incidents related to law. Terms used in forensic geology are both geological and legal words therefore geologists who are not familiar to legal issues may confuse or have some difficulties to understand.

In this presentation, a brief introduction of forensic science and geology will be provided with some description of words and terms that are often used to help understanding the following lectures.

Forensic geology was first indicated in the books of Sherlock Holms written by Sir Arthur Conan Doyle as it is for other types of trace evidence. Holms could even estimate a place in London where a person walked about with a glance at his shoes covered with mud. Trace evidence can provide objective information that connects a victim, a suspect, a place, and the tools involved in a crime. There is a growing need for utilization of trace evidence such as small amount of soil found from a clothing of a victim or a car of a suspect to support investigation.

Forensic science and the words such as “法科学 (forensic science)” and “科捜研 or 科警研” are being known to people over TV dramas and news of high profile cases these days in Japan. Unfortunately, the position of geologist in forensic laboratories is scarce in Japan and it may be a cause of less attractiveness of forensic science to students of geology. However, number of students who are interested in working at forensic laboratories of prefectural police headquarters is not negligible in general, although it is rarely included in regular programs of graduate or undergraduate. Forensic science programs are available at universities in UK, USA, Australia and Switzerland, and students can get a degree.

There’re chances of working on trace geological evidence to whom studying geology in universities and museums. In many countries such as UK and the USA, forensic geology is performed by geologists and pedologists in universities, research institutes, and private consulting companies as well as laboratories of law enforcement.