Abstract

This research is concerned with the marks left on bone during a criminal dismemberment. The aims of the research were twofold:

- Determination of which viewing mode records sufficient detail to view any useful toolmarks left by saws on bone.
- Establishment of a database that allows the determination of class and subclass of saw/s used in a case of criminal dismemberment. The database was to be based around striations observed on the kerf wall by Professor Rutty in a prior case.

The first aim was successfully completed, and I would recommend the use of stereoscopic light microscopy for measurements of kerf floor width. For viewing the kerf wall I would recommend the use of Environmental Scanning Electron Microscopy.
The second aim was not completed however. The marks described by Professor Rutty were found to vary with user as well as saw class, and as such were not suitable for saw class determination. Other types of striations were observed on the kerf wall however, and it is believed that these hold the potential for individual saw determination. A potential protocol for the matching of these striations to specific saws has been proposed.