

28 April 2010

**Fingerprint Inquiry – Request for fingerprint Examination of
Material**

Joanne Tierney
Fingerprint Manager
SPSA FS Edinburgh

BACKGROUND

In February 2010 I was approached by Mr Tom Nelson, Director of Forensic Services and asked to oversee the examination of some new fingerprint marks, which had been found on a metal tin and doorframe related to the Marion Ross Murder case.

These marks had been developed and photographed by scientists instructed by the Fingerprint Inquiry. The Fingerprint Inquiry had also commissioned fingerprint examination of the marks by another UK fingerprint bureau.

On 11 March 2010 Mr Tom Nelson left a package containing the above material at the reception desk, Police Headquarters, Fettes Avenue which was subsequently picked up by one of the experts from the fingerprint unit and placed in secure storage until my return to the office.

On 16 March I examined the contents of the package which included a letter from Mr Scott Pattison, Director of Operations, Crown Office and Procurator Fiscal Service (COPFS), requesting that an assessment of the new marks be carried out and if suitable compared against the fingerprint forms contained therein.

I had a few queries about the contents of the package, which I raised with Tom Nelson via email on 16 March 2010. These queries were answered in correspondence dated 29 March 2010.

On receipt of the above correspondence I prepared 2 x fingerprint packs, which were distributed, to 2 operational experts within the Edinburgh Fingerprint Unit. The letter and instructions issued with this pack are shown at Appendix A.

I can confirm that neither of the experts had had any previous involvement with the McKie / Asbury case, have never made any public comments about the marks in these cases and have not been involved in correspondence / petitions signed regarding these cases.

SUMMARY OF FINDINGS

1. Further Ridge detail noted as developed inside metal tin

Expert 1

"This impression is of a very poor quality with lack of clarity. There is deposition pressure to the top and core of the impression, it is heavily contaminated with background noise from the structure of the metal tin. Ridge flow suggests that the impression may be a loop or an elongated whorl pattern. The poor quality of the impression and the lack of characteristics preclude me from making any type of comparison."

Expert 2

"The impression is of a fingerprint and is of poor quality and clarity with the ridge flow being suggestive of a loop pattern or elongated type whorl. There are no indicators that would allow me to make a specific choice as to what finger it could be. The ridge flow across the core is partially obscured by what looks to be either the effect of the development medium or general contamination on the substrate. I would classify the impression as having insufficient detail for comparison purposes and as such cannot be searched on Ident 1.

Summary of Findings = not suitable for manual comparison, not suitable for computer search

2. Mark QJ2 on outside of tin

Expert 1

"The ridge flow shows a whorl pattern with a well defined circular core possibly from a left digit. The print though showing a well defined pattern has poor clarity and a lack of characteristics. There is a lot of background noise due to the structure of the tin, the ridges above the core are fragmented and there is deposition pressure on the right side of the impression. Large black lines of an unspecified nature are crossing the impression below the core on the left edge. Although the impression is of poor quality and unidentifiable due to lack of characteristics it could be used for exclusion purposes, which I did do against the 4 sets of submitted prints. None of these had a similar type pattern."

Expert 2

"The impression is of a fingerprint that displays moderately good clarity with the pattern being a whorl. The ridge flow suggests the finger would

likely belong to the left hand or right fore finger. Scrappy ridging and surface contamination obscure the detail in the left hand side of the print. Several dark lines score through the impression above and below the core. The impression appears to be reversed for colour with dark pore spots appearing along several of the ridges. For my comparison starting point I used the bifurcation directly to the right of the core, then on the seventh ridge to the right another bifurcation, followed by another bifurcation on the third ridge to the right again. I worked through the rest of the scene of crime impression and compared it with the fingerprints of Marion Ross and David Asbury with a negative result. The impression did not have enough detail for an Ident 1 search."

Summary of Findings = Suitable for manual comparison and compared with negative result, not suitable for computer search

3. Mark beneath QJ2

Expert 1

"The ridge flow shows a whorl pattern possibly from a left digit. There is a lot of background noise due to the structure of the tine and there is deposition pressure to the top and left side of the impression. V shaped black lines of an unspecified nature are crossing the impression below the core and on the right edge. The impression is of poor quality and would be used for comparison purposes only. The ridge characteristics that are present are clustered around the right delta region. From the delta 4 ridge counts right there is an upward termination, from this point 5 ridge counts to the left there is a downward bifurcation, following the right leg of the bifurcation there is a further bifurcation down. These formed the focal point for my comparisons.

The print was checked against the 4 sets of submitted finger impressions which met with a negative result."

Expert 2

"The impression is of reasonably good quality with clear ridge flow. The impression is of a finger with a pattern, which conforms to a whorl. The core and right hand delta are clearly visible and this is where the best overall clarity is present. The ridge flow is indicative of the finger being from the left hand. To begin my comparison I used the double bifurcation to the left of the delta, then counted six ridges to a termination flowing upwards, missing a ridge and finding another termination flowing downwards. I worked through the rest of the print comparing it with the fingerprints of Marion Ross and David Asbury with a negative result. I also searched the print on Ident 1 with negative result."

Summary of Findings = Suitable for manual comparison and compared with negative result, computer search with negative result (computer search by expert 2 only)

4. Photo 70 – on doorframe

Expert 1

“Two impressions found within the photograph. One above the scale marker 180. This was a scrappy fragmented digit impression probably loop pattern with ridge flow to the left. Movement can be seen to ridges at the top and bottom of the impression, which is also reversed for colour on the bottom half of the impression. There is background noise from the substrate, which contributes to its poor quality. No discernable characteristics could be found and the print is therefore insufficient for any comparisons to be carried out.

The second print is above the scale marker 205. Ridge flow suggests that this is a loop pattern to the left. There is slight pressure distortion on the right edge of the impression with background noise to the bottom and left edge of the impression. Initial analysis revealed approx 10 characteristics to the right edge of the core. On the right edge of the central staple there is a bifurcation down, 4 ridge counts to the right and up there is a bifurcation down, 3 ridge counts to the right and down there is an independent ridge. These formed the focal point for my comparisons. Taken in conjunction with the above impression this digit is probably a left middle finger.

The print was checked against the 4 sets of submitted finger impressions which met with negative result.”

Expert 2

“ The photograph features two finger impressions side by side. Upon examination the left hand impression does not contain sufficient detail for comparison purposes. The right hand impression is of good quality with clear ridge flow and features, there are faint horizontal lines running through the impression but these do not influence the ridge detail. All the detail appears from the core and above, however there is not enough revealed below the core to definitively establish the pattern. It looks to be either a loop to the left or right or possibly a whorl. Given its relative position to the other impression this suggests the right hand impression is a right middle finger, a left middle finger or a left ring finger. For my comparison I counted from the central staple at the core to the fifth ridge on the right, which had a bifurcation. From there I moved to the right and on the ninth ridge found a short independent ridge. I continued through the rest of the impression in my comparison with the fingerprints of Marion Ross, Shirley Caldwell / McKie, Gary Gray and David Asbury. All comparisons produced a negative result and it was also searched negative on Ident 1.”

Summary of Findings = Suitable for manual comparison and compared with negative result, computer search with negative result (computer search by expert 2 only)

5. Photograph 73 – on doorframe

Expert 1

“This photograph contained a partial impression of the top section of a digit which can be seen above scale marker 170. Ridge flow suggests a possible left digit. The impression is of a poor quality suffering a large amount of background noise from the substrate and which is in part reversed for colour. There is a lack of discernible features within the ridge formation making this impression unsuitable for comparison purposes.”

Expert 2

“The impression is of moderate quality with defined ridges and features visible. Based on the size and ridge flow, together with the faint white crease lines I considered the possibility of it being a palmar impression or a fingerprint towards the top of the finger, although I could not give an option as to what finger. There are occasional circular shapes that appear through the print but they are not prominent enough to obscure the ridge detail. In my comparison I used a ridge that split into bifurcations going in both directions. On the second ridge above this there is a lake formation followed by a bifurcation to the right on the third ridge above the lake. I compared the impression against Marion Ross, Shirley Caldwell / McKie, Gary Gray and David Asbury. All comparisons produced a negative result and the Ident 1 search was also negative.”

Summary of Findings = Expert 1, unsuitable for manual comparison, unsuitable for computer search.

= Expert 2 suitable for manual comparison and compared with negative result, computer search with negative result.

6. Photograph 74 – on door frame

Expert 1

“The top half of the impression shows deposition pressure with a bunching of the ridges and little clarity. The middle of the impression from core to delta has good clarity with a reversal in colour. The ridge flow suggests a loop pattern to the right with the impression possible having been made by a right digit. There are areas of interference between the core and delta in the form of horizontal scoring.

On initial analysis I could see a bifurcation down on the right leg of the central staple, 3 ridge counts to the left of the core there is a bifurcation down with 1 further ridge count left and up there is a bifurcation up. These formed the focal point for my comparisons.

The print was checked against the 4 sets of fingerprints which met with a negative result.”

Expert 2

"The impression is of good quality with clear ridge flow, pattern and features evident. The pattern is of a loop to the right, or potentially a whorl. The ridge flow indicates this finger impression belongs to either a finger on the right hand or a left fore finger. The best clarity is found near the core as the ridges become fragmented towards the top of the impression. There is a slight grain effect running through the print but this does not substantially interfere with the ridge features. On the left hand side there is evidence of slight double impression that gives the appearance of a possible delta – but in my opinion it is not the true delta. In my comparison I began with the double termination at the core counting out left four ridges to a bifurcation flowing downward immediately followed by two bifurcations flowing upward on the two subsequent ridges. I continued through the rest of the impression in my comparison with the fingerprints of Marion Ross, Shirley Caldwell/ McKie, Gary Gray and David Asbury. All comparisons produced a negative result and the Ident 1 search was also negative."

Summary of Findings = Suitable for manual comparison and compared with negative result, computer search negative (computer search carried out by expert 2 only)

Signed copies of the above reports along with associated paperwork have been retained securely within the SPSA FS Edinburgh Fingerprint Unit.

Joanne Tierney
Fingerprint Manager
SPSA FS Edinburgh

28 April 2010.