



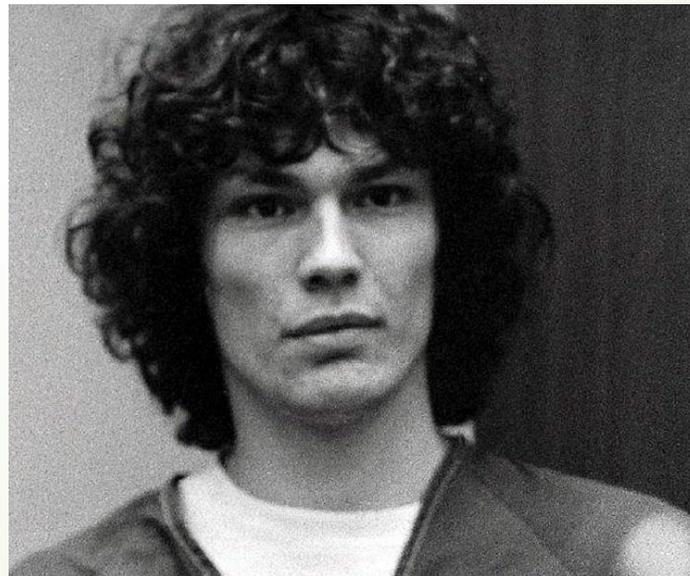
Collection of Foot and Footwear Impression

What is Foot and Shoe Impression? Why is it important as evidence?

- ▶ It is the impression of foot with or without footwear.
- ▶ One of the most important trace evidences, often overlooked by culprits as well as investigators, carrying some crucial information itself.



AVIA Black Size 11 and half



Richard Ramirez



**Same shoeprint on
victim's bed sheet**



Materials Required :

- A good digital camera
- De-sensitized bromide paper
- 15 cm wide adhesive tapes
- Thick transparent plastic sheets
- Plaster of Paris
- Aluminium flexible strip
- Shellac solution, mineral oil, talcum powder
- Miscellaneous things
wax, resin, modelling clay, lead, rubber bowl, spoon, sieve, wire gauze strip, sprayer

Tracing :

- Crudest but easiest way to record a shoe or foot mark.
- A glass or plastic sheet is taken and the outline is traced exactly as the print is.
- For shoeprint – wear and tear pattern, repair work, nails, stiches
- For naked foot print – Shape of toe, fingers, phalange, crease marks
- Modern techniques made this obsolete.



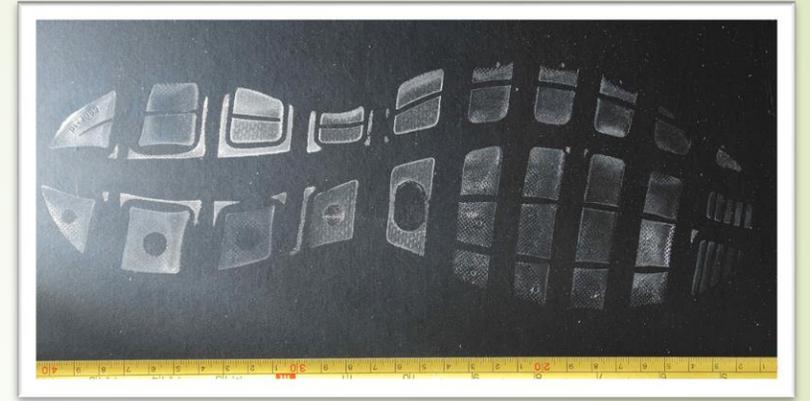
Photography :

- The lens is kept parallel to the surface, at a height where it gives a clear and sharp image.
- Depth of field, Focus and aperture is adjusted properly.
- 4 photographs are taken, two with lighting from both side at 45 degree, and 2 with single oblique lighting from one side
- 3 dimension photos for sunken prints.



Lifting :

- **“Now or never”** technique, as it mutilates or disturbs the original print.
- A desensitized bromide paper sheet is taken, softened by hot water, then placed over the print and pressed uniformly. Particles of print attached with gelatin surface of the paper, outline of the print is obtained.
- If print is found in light shade, exposed (black) paper is used, if found in dark shade unexposed (white) paper is used.
- Can be done by using powder techniques and adhesive tapes from nonporous surface, Gelatin lifters from porous and nonporous surface etc.
- Cellulose acetate is sprayed over impression on thin layer dust to make it prominent.



Casting :

- ▶ Extraneous matters are removed without disturbing the impression.
- ▶ Shellac solution is sprayed over the print to get a “skin” over it, then mineral oil is also sprayed for easy separation of shellac layer from casting material.
- ▶ Aluminium frame is placed around the impression as a retaining wall.
- ▶ Plaster of paris is poured and allowed to flow slowly to fill the cast to reach thickness of 1 cm.
- ▶ Cast is reinforced using wire gauze.
- ▶ More plaster of paris is poured till 2 cm of thickness.
- ▶ Allow the cast to set for 20-25 min. After setting hard it is lifted and washed under water.



Holography :

- Laser technique for recording invisible foot or shoe impression on carpet.
- Fibres of Carpet are compressed by shoe or foot when a person walks over it.
- The compressed fibres tend to resume their original position.
- It is not visually appeared but fibres take long time to come to their original position.
- A laser beam is able to record this compression in different time interval on photographic plate.



Electrostatic Techniques :

- For lifting invisible foot print or shoe print from floor or floor covering.
- Based upon the principle that dust particles can be lifted at high voltage to a vinyl sheet where they can be photographed or fixed on a gelatin paper.
- A black vinyl sheet is taken cover the area suspected to have foot or shoe marks.
- The sheet is covered by aluminium foil, then high voltage of 15,000 Volts is applied on foil.
- Photograph is formed on the sheet.



Latent Print Processing :

- Magnetic powder is sprinkled with a brush. Magna brush technique is preferable.
- Developed print is normally photographed and lifted.
- Alternative light source (Preferably UV) is used to observe, then photographed.





Thank You 😊