



International Journal Of
**Recent Scientific
Research**

ISSN: 0976-3031
Volume: 7(2) February -2016

EXCEPTIONAL EVIDENCE: BARE FOOTPRINT ON PLASTIC TOY LAPTOP

Uğur Argun and Savaş Tepecik



THE OFFICIAL PUBLICATION OF
INTERNATIONAL JOURNAL OF RECENT SCIENTIFIC RESEARCH (IJRSR)
<http://www.recentscientific.com/> recentscientific@gmail.com



RESEARCH ARTICLE

EXCEPTIONAL EVIDENCE: BARE FOOTPRINT ON PLASTIC TOY LAPTOP

Uğur Argun¹ and Savaş Tepecik²

¹Ankara Police Directorate

²Balıkesir Police Directorate

ARTICLE INFO

Article History:

Received 06th November, 2015

Received in revised form 14th

December, 2015

Accepted 23rd January, 2016

Published online 28th

February, 2016

Keywords:

Crime scene investigation,
ridgeology, personal identification,
bare footprint

ABSTRACT

In forensic science identification of the suspect is one of the most important subject that has to be performed by the crime investigator. Relying on evidences many crimes can be solved relatively, but evidence, left by a suspect, at a crime scene is likely to include foot or shoe prints. Despite the fact that suspect cannot commit a crime without touching something or marching at a crime scene, only little percent crimes can be identified by using fingerprint or footprint identification. At least Locard's 'every contact leaves a trace' principle is a well-known motto that clarifies this approach. In this study the significant contribution of forensic ridgeology and personal identification is demonstrated via a bare footprint that is obtained in a burglary investigation which is set out in Turkey in 2010. It is showed in the incident that bare footprint has uniqueness and related investigation has resulted with success because of matching footprints.

Copyright © Uğur Argun and Savaş Tepecik., 2016, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

In contrast to some European Countries and with same application in Canada Forensic Identification Specialists, are police officers who attend all major crime scenes to gather any physical evidence at the scene, for example, hair, fiber, blood, fingerprints, footwear, tire impressions and any fracture breaks or torn articles (Kennedy, 1996:81). Their study depends on the phases that requiring attention and after collecting strong evidences they can reach success in identification of committer.

At the same time, as it is known, suspects are getting experience on behavior like 'not touching without glove or socks' and 'not left footprint behind' at a scene. In this manner the crime investigator knows that he/she have to be more careful on detecting evidence. Some evidences are rare and are very coincidental at crime scene just as tire print, tooth print, palm print and etc. Also footprint and toe print are evidences that can be coincident. Behind this, bare footprint is exceptional evidence that can indicate the committer.

LITERATURE REVIEW

Footprints are impressions of dermal ridges present on the plantar aspect of feet that appear in intrauterine life and remain

unaltered until death. It is a well-established fact that footprints are highly individualistic and have proven significance in personal identification (DiMaggio and Vernon, 2011; Singh, Singh and Kaur, 2013). When a person walks barefoot on a surface, an impression of the ridged skin may be left behind. Detailed analysis of footprints at the crime scene hence becomes vital to identify the suspect and establish a crime (Kanchan *et al.* 2012:469).

Some studies (Kennedy, 1996; Yamashita, 2007) to date have shown that the possibility of identifying an suspect through pressure areas taken from an inked barefoot impression is a good example of identification. In a forensic context, the comparison of the morphology, or shape, of barefoot impressions has been used previously in criminal investigations and in the courtroom (Kennedy *et al.*, 2003).

There are numerous references in the literature to footwear evidence relative to footwear identification, the earliest recorded case dating back to 1876 in Scotland (DiMaggio, 2005). Footprints have been studied for a long time for their forensic significance. Significance of various individualistic characteristics of footprints (Kennedy, 1996) and their potential use in forensic examinations has been demonstrated. Previous studies examined the relationship between stature of the person and footprint size (Kanchan *et al.*, 2012) and that the former

*Corresponding author: Uğur Argun
Ankara Police Directorate

can be approximated from the latter in forensic examinations. Prints obtained from the crime scene are often matched with the suspects' to confirm their involvement.

When the Royal Canadian Mounted Police (RCMP) first contemplated the use of this technique while investigating a serial murder case, a background search found evidence of some successful cases (Yamashita, 2007). The use of barefoot impression morphology in its current form by the Royal Canadian Mounted Police (RCMP) had its origins in the Alan Legere case in 1989. Although extensive research into the individuality ("uniqueness") of barefoot impressions was not performed until last decade, barefoot comparisons were presented in court for many years (Kennedy, 2005: 403).

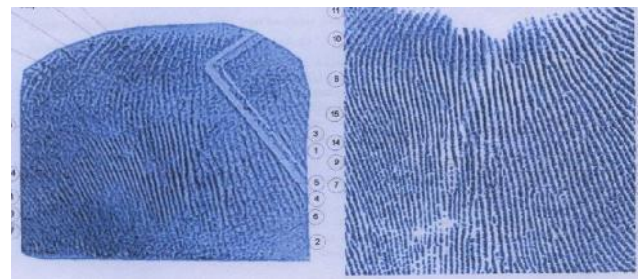
The success in determination of perpetrator's identity is depending on perfect study at crime scene. The choice of a good material for casting shoe/foot impressions is important because obtaining a good casting depends on the ease of application. Silicone does not meet the requirements because of high cost and lack of adaptability to the environmental conditions (E. Du Pasquier at al., 1996:43). On the other hand fingerprint brush, powder and fingerprint tape that commonly used in the modern countries are more suitable and have more success in crime scene investigation and evaluation processes. In ridgeology, it is well-known that ridge structures do not change from birth to death except injury, wound or disease and they possess an infinite variety of details that cannot seen in other areas of skin (Ashbaugh, 1991). All forensic medicine experts and crime scene investigators can profit from this qualification of footprint.

Case: A Burglary Incident

In 2010, a burglary crime was committed in Balikesir, a city of Turkey. After the theft the 2 suspects could be caught two streets ahead of the home by descriptions of some witnesses. But the suspects refused all accusations about the theft crime (www.haberx.com). So, crime investigators were needed to proof the relation between the crime scene and the suspect.

Crime scene investigators collected some evidences from home that could be proof of the burglary crime. One of them was a bare footprint which was lifted from a plastic toy laptop. During the investigation crime scene investigator detected a print on the straight and bright surface of plastic toy laptop by using fingerprint kit. CSI experts use fingerprint brush and powder in almost all burglary incidences. Latent prints just as fingerprint, palm print and bare footprint and can be lifted from the surface by applying this fingerprint powder and brush on it and then by lifting via fingerprint tape. But at first glance it was an unusual situation. Because the trace doesn't have similar appearance to fingerprint. It was a bit larger than a fingerprint and did not have characteristics just as whorl, delta and core. It was obvious that the trace was belongs to a human body. But it was not clear that trace was a finger print, a palmprint or footprint?

Comparison table of two prints that drawn by fingerprint experts



footprint lifted from plastic toy laptop bare footprint sample from the suspect

Figure 1 Comparison table that designated by fingerprint analysts reflects the similarity of two footprints on 15 characteristics

Comparisons are performed by an analyst who views the known and suspect prints side-by-side. The analyst compares minutiae characteristics and locations to determine if they match. Known prints are often collected from persons of interest, victims, others present at the scene or through a search of one or more fingerprint databases such as Automated Fingerprint Identification System (AFIS). By examination of fingerprint analysts in Crime Scene Investigation Division of Balikesir Police Department this impression evaluated as a bare footprint. After lifting an inked sample bare footprint from the suspect it was compared with footprint that had lifted from the crime scene. The conclusion was successfully because of two footprints' matching via 15 similar characteristics. So, it was recorded as the first crime that identified by bare footprint.

CONCLUSION

Crime scene investigation is a main duration in all crime investigations and also in trials. In visual determination at the scene sometimes some clues can be neglected. This study shows that bare footprint has uniqueness like a fingerprint and if a crime scene investigator evaluates the impression that can be a footprint then it will be valuable evidence. Although footprint classification system was developed and used over the years in some countries one-by-one comparisons can be used in the countries that don't have footprint classification system but have fingerprint classification systems or at least have fingerprint experts.

References

- Ashbaugh D. R. (1991).Ridgeology: Modern Evaluative Friction Ridge Identification, Royal Canadian Mount Police Forensic Identification Support Section, Retrieved in 26/02/2016 <http://onin.com/fp/ridgeology.pdf>.
- DiMaggio J.A. (2005), "The role of feet and footwear in medicolegal investigations", In Rich J., Dean D.E., Powers R.H., Forensic Medicine of the Lower Extremity, (Totawa: Humana Press),.
- DiMaggio J.A.and Vernon W. Forensic Podiatry Principles and Human Identification. Humana Press,London,2011, pp 13-24.
- Du PasquieraE. Hebrard, J. MargotaP. andIneichenM. (1996). Evaluation and comparison of casting materials in forensic sciences Applications to tool marks and

- foot/shoe impressions, Forensic Science International 82:33-43
- Kanchan T., Krishanb, K.R. Aparnaa K, Shyamsundera S. (2012). Footprint Ridge Density: A New Attribute for Sexual Dimorphism, *HOMO-Journal of Comparative Human Biology*, 63: 468– 480.
- Kennedy R. B. (1996). Uniqueness of Bare Feet and Its Use as a Possible Means of Identification. *ForensicSci Int.*; 82: 81–87.
- Kennedy, R. B. (2005). Ongoing Research Into Barefoot Impression Evidence, Rich, Jeremy, Dean, Dorothy E., Powers, Robert H. (Eds.), *Forensic Medicine of the Lower Extremity*, pp-401-413.
- Kennedy R.B., Pressman I.S., Chen S., Petersen P.H. and Pressman A.E. (2003). Statistical Analysis of Barefoot Impressions. *J ForensicSci*, 48(1):1-9.
- Singh, S.P., Singh, D and Kaur, S.(2013), Forensic Podiatry and Human Identification, *J Punjab Acad Forensic Med Toxicol*;13(2), pp. 100-103.
- Yamashita, A. B. (2007). Forensic Barefoot Morphology Comparison, *Canadian Journal of Criminology and Criminal Justice*, Vol. 49, No. 5, September, pp. 647-656.
- [http://www.haberx.com/balikesir_oyuncaktaki_ayak_izi_hirsi_zi_ele_verdi\(17,n,10371232,291\).aspx](http://www.haberx.com/balikesir_oyuncaktaki_ayak_izi_hirsi_zi_ele_verdi(17,n,10371232,291).aspx)

How to cite this article:

U ur Argun and Sava Tepecik.2016, Exceptional Evidence: Bare Footprint on Plastic Toy Laptop. *Int J Recent Sci Res.* 7(2), pp. 9052-9054.

T.SSN 0976-3031



9 770976 303009 >