BARACK OBAMA'S IDENTIFICATION FOOTPRINT

Infant to Adult Footprint Comparison

By: Lucas Daniel Smith and Bruce Steadman

"The examination determined the presence of flexion creases readily visible."

The above quote was made in an official printed report by a licensed finger/footprint expert who under contract examined the 'pristine image version' footprint appearing on the August 4, 1961 Birth Certificate of Barack Hussein Obama II issued by the Coast Province General Hospital, Mombasa, British Protectorate of Kenya.

1. In May 2013 Mr. Bruce Steadman and plaintiff LUCAS DANIEL SMITH launched a footprint evaluation project, ***Infant Footprint Evaluation with Possible Future Comparison to Adult Footprint***, which included input from three (3) licensed finger/footprint experts. Our objectives:

a. Is infant-to-adult footprint comparison possible?

b. Does defendant BARACK HUSSEIN OBAMA II's infant footprint, contained within the Coast Province General Hospital birth certificate, contain adequate ***friction ridge*** characteristics that could, alone, be used in a comparison (with an adult) examination?

c. Does defendant BARACK HUSSEIN OBAMA II's infant footprint, contained within the Coast Province General Hospital birth certificate, contain adequate *flexion creases* characteristics that, alone, could be used in a comparison (with an adult) examination?

2. The footprint evaluation project, which was conducted by a number of licensed finger/footprint experts, was an idea that developed from what Mr. Bruce Steadman deemed, in writing, to be a very important literature research find: "***Infant to Adult Footprint Identification***", Sinclair & Fox, Journal of Forensic Identification, Vol. 57, No. 4, July/August 2007 (pp. 485-492). (Relevant sections of the said journal, including pages 485 thru 492 are attached as ***Exhibit C***.)

3. An abstract from the above referenced journal states that, "A case report involving the examination of an infant footprint against an adult exemplar to establish citizenship in the United

States [of America] is presented. The size differential was eliminated through the use of enlarged ridge tracings which were used to demonstrate the comparison."

4. An introduction from the above referenced journal states that, "The comparison of footprint records to establish positive identification of individuals is a universally accepted practice within the fingerprint science."

5. The said introduction goes on to state that, "There is no biological or physiological difference between the friction ridge skin on the palmar or plantar surfaces, and they each possess the same value for identification purposes. Generally, most cases concerning footprint identifications arise from the examination of latent footprints developed at crime scenes or on evidence connected with criminal offenses and involve adult-to-adult footprint comparisons."

6. The said introduction continues with, "The recording of infant footprints after birth for the purposes of identification does not appear to be a routine practice around the world, and it seems to be done as more or a memento for parents. However, some hospitals in several states in the United States [of America] have a policy of footprinting newborn infants, ostensibly for the purpose of proving the identity of the baby in the event of a mix-up (or abduction of the child) at the hospital. There have been only a handful or reported cases where the comparisons of infant footprints have been used in criminal investigations. Notably, each of these cases involved the comparison of the flexion creases detail in each of the infant footprints, because the fine friction ridge detail was insufficiently recorded on the hospital records because of poor recording practices."

7. The said introduction closes with the following, "Although it is certain that infant-to-adult footprint comparisons have been undertaken in the past, a search of the major forensic identification literature failed to locate any previously reported cases of this kind, either in

Australia or elsewhere in the world. This fact became significant after the authors were tasked with carrying out an infant-to-adult footprint comparison at the request of the United States [of America] Consulate in Sydney."

8. The above referenced ***Infant to Adult Footprint Identification*** includes a segment which provides case background: "In May 2004, the New South Wales Police Forensic Services Group received a formal request from the United States [of America] Consulate in Sydney to record the footprints of an adult female and compare them with the footprints taken from an infant born in the United States [of America] in 1979."

9. The said case background goes on to state that, "The purposes of this request was to determine the veracity of the individual's application for a United States [of America] passport and recognition of United States [of America] citizenship, based on her claim that she was the infant referred to in the relevant birth records containing the infant footprints."

10. The said case background continues with, "The applicant claimed that she had been born in the United States [of America] and had migrated to Iraq with her parents as a young child. Within the last few years, the applicant and her mother had fled Iraq for Australia without any current formal documentation to positively establish her identity. Temporary refugee status was subsequently granted by the Australian government, pending further investigations. A formal application for a United States [of America] passport was then lodged by the female concerned to the United States [of America] Consulate. She presented an unofficial United States [of America] hospital birth certificate as supporting evidence of her identity. The unofficial birth certificate contained what the applicant claimed to be her left and right footprints, taken shortly after her birth in a hospital in the United States [of American] in 1979."

11. The said case background closes with the following, "Authorities in the United States [of America] confirmed the authenticity of the applicant's birth certificate containing the infant footprints with the relevant hospital in the United States [of America] and established that the document and the names and signatures contained thereon were genuine. Based on this, the U.S. State Department accepted that the person matching the footprints on the certificate would be acknowledged as a citizen of the United States [of America].

12. The above referenced ***Infant to Adult Footprint Identification*** includes a segment which is labeled as Acquisition of Infant and Adult Footprints: "Detective Senior Constable Craig Fox of New South Wales Police Fingerprint Operations attended the United States [of America] Consulate in Sydney and took possession of the subjects birth certificate containing the infant footprint records. On initial inspection, the infant footprints contained on the birth certificate were found to be almost completely unsuitable for comparison purposes. Unfortunately, it appears that the medical staff who obtained the infant footprints exercised minimal care when recording the prints, resulting in smudged and over-inked prints, rendering most of the fine friction ridge detail illegible (a common problem identified in the literature).

13. The said Acquisition of Infant and Adult Footprints segment goes on to state that, "The only part of either infant footprint that appeared suitable for possible friction ridge comparison was one small area located directly below the big toe of the right foot, and enlarged photographs were later taken of this particular area to assist with the comparison process. Samples of the person's footprints were then obtained by utilizing a powdering and lifting technique, where a light coating of standard black fingerprint powder was brushed onto the ridge skin on the underside of both feet. Several recordings of each footprint were then carefully lifted, first with white adhesive labels and then with gel-lifters."

14. The above referenced ***Infant to Adult Footprint Identification*** includes a segment which is labeled as Analysis and Comparison Method: "Detective Sergeant Rick Sinclair of New South Wales Police Fingerprint Operations was then handed the task of analyzing and comparing the infant and adult footprints. Unfortunately, it was soon found that the poor clarity and limited quantity of friction ridge skin detail in the infant footprint, coupled with significant differences in size through expansion of the ridge skin due to growth, proved to make the comparison both challenging and problematic.

15. The said Analysis and Comparison Method segment goes on to state that, "As with all friction ridge comparisons, the process commenced with a thorough analysis being undertaken of all available friction ridge detail contained in the infant footprint at three levels: first level detail (pattern type and overall ridge flow and shape), second level detail (friction ridge characteristics) and third level detail (friction ridge shapes). Additionally, the paths and arrangement of the available flexion creases in the footprints were also noted during this phase of the examination."

16. The said Analysis and Comparison Method segment continues with, "Transparent tracing paper was placed over the enlarged comparable areas of both the infant and adult fingerprints, and the friction ridges were traced with pencil, noting overall friction ridge shape and flow (first level detail) and the relative location and relationship of the friction ridge characteristics present in each record (second level detail). Also recorded were the paths of available flexion crease detail present in both footprints. The end result of the tracings appeared to look somewhat like the striations of a fired bullet, with the relative lengths and paths of the friction ridge and the relationship of the friction ridge characteristics at the ends of each traced friction ridge being compared and evaluated in conjunction with the original images."

17. The above referenced ***Infant to Adult Footprint Identification*** includes a segment which is labeled as Evaluation and Identification: "Sufficient agreement was found at both the first and second levels of detail. There was some minor third level detail present consisting of sweat pore formations; however, these were lacking sufficient quality and quantity for comparison purposes. Nonetheless, in excess of fifteen matching friction ridge characteristics were noted in both footprints in the same relative position and sequence with no unexplainable differences, establishing a positive identification (independently verified by another senior fingerprint expert). ***Interestingly, during the comparison it was noted that the paths of the available flexion crease detail present in both the adult and infant footprints were also found to be in agreement.*** This lends further support to the theory of palm and foot flexion crease persistency referred to in previous cases and research."

18. The above referenced ***Infant to Adult Footprint Identification*** ends with the following conclusion: "As a result of this examination, the U.S. State Department accepted the identification and the applicant was granted a United States [of America] passport. She now resides in the United States [of America]. Significantly, inquiries made by the U.S. State Department in Washington, D.C. revealed that this method of identification has never before been used by them to verify a United States [of America] citizenship or passport applicant's identity. As indicated in the introduction, while undoubtedly cases similar to this have occurred in the past, a search of the major forensic identification literature failed to reveal any previously reported infant-to-adult footprint identification cases. The authors would most certainly be interested to hear about the experiences of any practitioners who have handled similar cases in the past."

[redacted] - footprint examination.

19. In early June 2013 Mr. Bruce Steadman contacted IAI (International Association for Identification) Certified Latent Print Examiner, [redacted], whose principle principal place of business is [redacted] and whose email address is [redacted], to request a footprint evaluation of the infant footprint contained with defendant Barack Hussein Obama II's Coast Province General Hospital birth certificate.

20. In early June 2013 [redacted] conducted the above referenced (paragraph 1) footprint evaluation and sent the following emailed evaluation results (June 6th, 2013), attached as ***Exhibit D***, to Mr. Bruce Steadman: "Hello Mr. Steadman: I have completed my examination of the electronic scan depicting a footprint per your request. I do not detect any friction ridge characteristics (unique characteristics on the skin of our feet and hands) in the scan. This, as you know, is not unusual as the individuals who take the footprints of infants at birth are not skilled in the process. I know you have read an article(s) concerning footprint identification and that you are aware that some believe the creases in the footprint (commonly referred to as "flexion creases") could be used in the identification process. Essentially, there are three schools if thought in this regard:

"**1.** ***Those who believe that flexion creases alone can be used to positively identify an individual.***

"**2.** Those who believe that flexion creases alone cannot be used to positively identify an individual.

"**3.** Those who believe flexion creases coupled with visible ridge characteristics of friction ridge skin can be used to positively identify an individual."

21. [redacted] email went on to state that, "I fall into category # 3. Without the presence of visible ridge characteristics, I'm afraid your footprint is of no use in a comparison examination with a known footprint. I hope I have been clear in my explanation and I wish you good luck in the future. Regards, [redacted]."

22. Mr. Bruce Steadman thanked [redacted] for the emailed evaluation results and then requested a hard copy of the evaluation results. [redacted] subsequently sent a postal letter (postmarked 10 June 2013) to Mr. Bruce Steadman which contained the following "REPORT OF LATENT PRINT EVALUATION" (attached as ***Exhibit E***): "This report pertains to forensic examination conducted at request of Mr. Bruce Steadman, 2548 Midvale Forest Drive, Tucker, GA 30084."

23. [redacted]'s REPORT OF LATENT PRINT EVALUATION continued with a segment labeled as "Items Examined" which stated, "One electronic scan depicting one right footprint. Per Mr. Steadman, the footprint in that of an infant. The scan did not depict a measuring device without which the actual size of the footprint could not be determined."

24. [redacted]'s REPORT OF LATENT PRINT EVALUATION continued with a segment labeled as "Examinations Requested" which stated, "Examine the scan of the footprint to determine the presence of friction skin characteristic that could be used in a future comparison examination with a known footprint."

25. [redacted]'s REPORT OF LATENT PRINT EVALUATION continued with a segment labeled as "Results of Examination" which stated, "Examination of the scanned footprint did not reveal the presence of friction ridge characteristics that could be uses in a comparison examination. Note: It is not unusual for infant footprints to not depict friction ridge

characteristics as medical personnel recording the footprint are not trained or skilled in recording impressions of friction ridge skin."

26. The segment labeled as "Results of Examination" continued, and ended, with, "***The examination determined the presence of flexion creases readily visible***. It is the undersigned's opinion, however, that comparison examinations utilizing flexion creases alone as a means of positive identification (particularly those depicted in a new born infant's footprints) should not be attempted without the presence of friction skin characteristics to compare as well." (signed) – "[redacted], CLPE 06/10/2013."

27. The digital scan of the footprint (right foot) contained within defendant BARACK HUSSEIN OBAMA II'S Coast Province General Hospital birth certificate, and examined by IAI (International Association for Identification) Certified Latent Print Examiner, [redacted], is provided directed below (and attached as ***Exhibit F***):

[redacted] - footprint examination.

28. In late June 2013 Mr. Bruce Steadman contacted [redacted] (in partnership with [redacted]), a Forensic Identification Consultant, Certified Senior Crime Scene Analyst, and IAI (International Association for Identification) Certified Latent Print Examiner, whose business address is listed as [redacted] and whose email address is [redacted], to request a footprint evaluation of the infant footprint contained within defendant Barack Hussein Obama II's Coast Province General Hospital birth certificate.

29. In late June 2013 [redacted] sent the following email (1st email) reply (June 24th, 2013) to Mr. Bruce Steadman: "Mr. Steadman, This is interesting and might be something I'd like to be of some assistance. I'm somewhat busy today, but tonight I'll look up data on infant footprint identifications. I have several questions to ask about this "case", and so on. Tomorrow I hope to be able to respond with information & my questions. ***I am a latent print comparison expert and have testified in court after I id'ed a dead infant by foot creases***. [redacted]."

30. In late June 2013 [redacted] sent the following email (2nd email) reply (June 25th, 2013) to Mr. Bruce Steadman: "I am in the process of searching for foot crease identification experts. I regret to say that so many in my field of identification have retired and have even ceased doing consultant work. At age [redacted] I've slowed down myself. Also, I am getting some data on crease identification collected which will be mailed to you. As for myself, I fall into category #1 [***Those who believe that flexion creases alone can be used to positively identify and individual.***] regarding the 3 groups of experts you mentioned in your e-mail. Naturally, category #3 is always a nice situation to have.....a combination of ridges and creases. However, creases alone if the individual kind and clear enough can be the basis of an identification. There is one

question I'd like to ask. Of course you don't have to answer. I'd understand. Is the infant footprint you are referring to on a Kenyon birth certificate? [redacted]."

31. In late June 2013 [redacted] sent the following email (3rd email) reply (June 27th, 2013) to Mr. Bruce Steadman: "I managed to make contact with another outstanding foot crease expert. I regretted to learn he has totally retired from teaching, writing, and ceased all forms of his and my mutual profession. As I said in a prior e-mail, I am not taking on many consultant projects. Yours was very tempting. I appreciate your asking me. It was extremely difficult to turn down, but I must pass. Please be assured, our messages to each other are, and will, remain confidential. I am mailing you several items.

"*An excerpt from an very good fingerprint text book It has a chapter on palm creases. Palm creases apply to foot creases, too. A bookstore or an internet site may have data on a price, etc.

"* A copy of an article on foot creases.

"* The name of a fingerprint expert. I consider him to be well qualified in this field. I do not know if he handles the type of consultation you need. I have not spoken to him about your project. My best to you and your project. [redacted]."

32. A postal letter (postmarked JUN 28, 13), sent by [redacted], was later received by Mr. Bruce Steadman.

[redacted] and the first case of flexion creases to be accepted by a court of law in the United States of America.

33. [redacted] wrote and published ([redacted]) an article, "[redacted]," which was published in an April-June [redacted] issue of

the T.D.I.A.I. (Texas Division of the International Association for Identification) newsletter. The criminal case, and [redacted]'s testimony, was also discussed in David R. Ashbaugh's book, [redacted] (published [redacted]).

34. When, in 1958, [redacted] began a career in the field of identification, it was stressed that "creases" were not points of identification. All emphasis was placed on "friction ridges". Creases in the palm were considered simply reference points and although mentioned in texts were still in a state of study. The creases latent examiners were taught to avoid were those described by Sir E.R. Henry in 1900. Concerning those creases and permanent palm creases he wrote, "In addition to the creases which are permanent, such as those marking the divisions between the phalanges of the fingers and those on the palm caused by the doubling up of the hand, creases not permanent may appear on the bulbs of the fingers" (see *Classification and Uses of Fingerprints*, published by Her Majesty's Stationary Office, London, p. 201 (1900 & 1934).

35. During the spring of 1995, in Sulphur Springs, Texas, the body of a 19 year old female was found in her apartment. She had literally been butchered. It was one of the worst dismemberment homicides that [redacted] had seen in 37 years. Without going into graphic detail, the victim had been stabbed, mutilated and dissected with several weapons. Knives, razor blades and forks were used. Numerous body parts and organs were removed. Some were placed in her throat, along with part of the weapons. Not all severed or removed parts and organs were located. Initials were carved in her back. The attack took place on her bed.

36. The Sulphur Springs Police Department began a comprehensive crime scene investigation. They were assisted by the Texas Rangers, Dallas County Sheriff's Department, The Dallas County Medical Examiner/Southwestern Institute of Forensic Sciences and others.

They collected physical evidence which eventually led to the 27 year old defendant, an ex-boyfriend of the victim. Some of the major evidence consisted of the victim's blood (DNA) on his clothing, his hair on the victim, his latent fingerprint in her blood on the apartment's window blind adjustment rod and the bloody latent palm print with the creases. [redacted] was asked to compare the palm latent with the defendant's palm.

37. The latent was a bloody palm print on a sheet where the victim had been lying. ***There were no friction ridges present in the print, but the palmar flexion creases were exceptionally detailed and discernable.***

38. Using crease terminology suggested by David R. Ashbaugh (*Palmar Flexion Crease Identification. Journal of Forensic Identification, 41 (4) 1991, p 271--272.*), the creases present in the bloody latent and the defendant's left palm were major palmar flexion creases, minor flexion creases, secondary flexion creases and finger creases. There were sufficient random formed creases in conjunction with the major flexion creases to form an opinion that the defendant's left palm made the bloody palm print on the sheet.

39. [redacted] prepared a court exhibit of the unknown and known palm prints. The similar characteristics were charted, depicting both possible hereditarily influenced creases and individual creases formed at random. Also, a demonstrative exhibit was constructed to acquaint the jury with the differences in flexion creases as they vary from palm to palm. Fifty left palm prints of individuals selected by chance were mounted beside the defendant's left palm print.

40. Prior to testifying [redacted] met with the Hopkins County District Attorney's Office to acquaint them with this less than common type of identification. During the trial they allowed [redacted] to conduct a mini-school for the benefit of the jury. Their direct and

redirect examination questions were outstanding. ***The jury deliberated for 15 minutes. The defendant received a life sentence. The conviction was, unsuccessfully, appealed.***

[redacted] aka [redacted] - footprint examination

41. Found within, and among other documents, the contents of [redacted]'s postal letter (postmarked JUN 28, 13) to Mr. Bruce Steadman was a note which recommended a fingerprint expert by the name of [redacted] or [redacted] & Associates, Inc.

42. In the *STATE OF* [redacted] *v.* [redacted], [redacted] Supreme Judicial Court (Decided [redacted]), docket [redacted], [redacted] asserted that the trial court erred by failing to exclude the testimony of the State's expert palm print identification witness, [redacted] aka [redacted].

43. In April 2005 a two-year-old girl who lived next door to Tina Bickart and her husband Stephen Bickart spent the night at the Bickarts' apartment. On that night, after Bickart's husband, Stephen, returned home from his job, he and Bickart used marijuana and cocaine and drank alcohol. Bickart told her husband that she had a gift or present for him later on, and later that night she told him to go into the bedroom and "get ready." Stephen went into their bedroom and undressed; Bickart then entered the bedroom naked, carrying the two-year-old victim, who was also naked. Bickart and her husband had previously discussed their sexual fantasies involving children.

44. Bickart put the victim on the bed or in a chair in the bedroom and then inserted her finger into the victim's vagina. Bickart then had Stephen join them on the bed, and assisted Stephen in having anal intercourse with the victim. Bickart and Stephen both took photographs throughout these assaults with their digital camera.

45. Prior to trial, Tina Bickart filed a motion to exclude the testimony of the prosecution's expert witness, [redacted]. [redacted] was expected to testify that, utilizing palm print analysis techniques, he concluded that it was Bickart's hand penetrating the victim in the photograph of the assault. In an evidentiary hearing, Bickart argued that this testimony was unreliable, as this was the first time [redacted] or anyone else had attempted an identification using only palm creases (the lines that develop across the palm) without the accompanying friction ridges (the detailed patterns on a person's palm and fingers used in fingerprint identification), and where the medium was a photograph and not a latent print. Bickart also presented her own expert, Gregory Michaud, who testified that crease-only identification was not a generally accepted technique in the relevant scientific field and was not aware that it had ever been subject to peer-reviewed research. ***The court, applying the standard from State v. [redacted], [redacted], found that [redacted]'s testimony was sufficiently reliable and that it should be left to the jury to decide the weight to be given to his conclusions. Both experts subsequently testified at trial.***

46. ***After a jury trial, Tina Bickart was found guilty of all counts. She was sentenced to concurrent terms of imprisonment resulting in an ultimate sentence of eighteen years, with all but fifteen years suspended, and four years of probation.***

47. Tina Bickart contends that [redacted]'s testimony should not have been admitted at trial because it represented a novel application of a methodology, normally utilized to analyze friction ridges in latent prints for fingerprint and palm print identification, to instead analyze palm creases in a photograph. This application allowed [redacted] to make an identification of a hand using only its creases. Friction ridges are the tiny ridges found throughout the hand, the imprint of which can be used to identify a person depending on the level of detail available.

Creases are similarly found throughout the underside of the hand, and can be used by examiners of friction ridges to help orient the print (i.e. to determine the correct up and down position and spatial relationship of the ridges).

48. Tina Bickart asserts that the use of creases for identification purposes without accompanying ridge detail is not generally accepted and has not been subject to peer-reviewed research.

49. At an evidentiary hearing held prior to the trial, [redacted] testified to his professional background as a latent print examiner, and explained that he had done extensive research on palm crease analysis. [redacted] testified that although he often uses the creases of a palm as a means of identification, as do all print examiners, there is usually accompanying friction ridge detail to aid in the identification.

50. [redacted] ***testified that the photographs sent to him for evaluation in this case exhibited no friction ridge detail. This case also represented the first time*** [redacted] ***had been asked to identify a palm using only a photograph of the hand itself as opposed to a latent print.*** [redacted] testified that the analytical methodology he employed—the ACE-V method—to reach his conclusion that it was Tina Bickart's hand in the photograph was "a standard methodology that's used by most agencies that examine latent print type evidence," and that it was the same methodology he would use to examine a latent print with friction ridge detail.

51. Tina Bickart presented the testimony of her own expert print examiner, Gregory Michaud, who testified that although the ACE-V methodology employed by [redacted] was generally accepted within the scientific community, and "a very small contingency" of latent print examiners, including himself, believe that it is possible that creases could be used as the sole means of identifying a palm print, the application of the ACE-V methodology to palm creases

alone was not generally accepted. He testified that [redacted]'s work in the field of palm creases was "unprecedented," but that because there was a lack of training and standards on crease-only identification, most print examiners believe it should not yet be done. Michaud was particularly concerned that a lack of friction ridge detail makes it difficult to understand the sequencing of the palm creases (i.e. the spatial relationship between the creases and their location on the hand). Although he agreed that the ACE-V method was the proper method for photograph analysis, he testified that the hard copies of the photographs of Bickart's hands and the photograph of the abuse he had been provided lacked sufficient clarity to allow him to reach any conclusions with regard to identification.

52. In terms of [redacted]'s individual expertise, there was no dispute regarding his qualifications and extensive experience in the area of palm print analysis, and Gregory Michaud himself acknowledged the high esteem he had for [redacted]. The court reasoned, "We did have the benefit . . . of the person who [is] attempting the analysis is a person who has enormous experience, is clearly very very highly regarded in his field, and that's one of the factors . . . to consider." [redacted] also made reference to the extensive research he had done in the course of teaching certification classes on finger print and palm crease analysis, and it is worth noting that he has taught more than 300 three-day seminars across the country and around the world on this and related subjects. Both Michaud and all the examiners of the Michigan State Police where Gregory Michaud is employed have taken [redacted]'s palm print and courtroom testimony courses.

53. Though never published, [redacted]'s studies examined "thousands upon thousands upon thousands of inked palm prints." [redacted] acknowledged that his research never had the specific purpose of crease-only identification, but he testified that "over the years I found out what the different types of creases are, where they happen, what they look like, what the

commonalities are and what the uniqueness is and how the uniqueness manifests itself across the palm."

54. The trial court also noted that [redacted]'s opinion was tailored specifically to the facts of this case. Other technicians in [redacted]'s lab also did their own analysis of the photographs and came to the same conclusion. It is undisputed that both [redacted] and Michaud carefully reviewed the specific photographs they received in light of their own expertise.

55. In weighing all of the testimony, the trial court concluded that "when it's all weighed and realizing that while general acceptance [is helpful], it's clearly not required, and that one can utilize newly ascertained knowledge or newly applied principles that have not yet achieved [widespread] acceptance if the claim is sufficiently reliable . . . ." The court considered all the evidence before it and concluded that [redacted]'s testimony was sufficiently reliable.

56. [Tina] ***Bickart's claim that there was insufficient evidence has no merit. The entry is: Judgment affirmed.*** [redacted]. [redacted] Supreme Judicial Court.

57. In late July 2013 Mr. Bruce Steadman contacted [redacted] & Associates, Inc., whose principle place of business is listed as [redacted] and whose email address is [redacted], to request a footprint evaluation of the infant footprint contained within defendant Barack Hussein Obama II's Coast Province General Hospital birth certificate.

58. On or about the 2nd day of August in the year 2013 Mr. Bruce Steadman received the following email from [redacted], CLPE Senior Consultant / Technical Manager of [redacted] & Associates, Inc.:

59. "Mr. Steadman, I have reviewed your email and have a couple of thoughts. First of all, we cannot make a determination regarding the extent of conclusions without first seeing the

evidence. Anatomically, the way the major creases are anchored in the skin does make them permanent. However, additional creases can develop as the skin ages, and the quality of the reproduction of these creases in known prints can vary significantly. Secondly, our company does not typically work cases for private individuals, but rather through attorneys. It sounds as though you foresee the potential for a court proceeding, and in that regard we would need you to have your attorney contact us regarding the examination. The reason we do this is that there may be other legal factors involved in your case. Without having an attorney review and address those factors, it is possible that even if we could make a definitive conclusion on your case, there may be something about your case that would make the findings inadmissible in court. Please feel free to contact me at the below phone number and we can discuss your email further, or have your attorney contact us and we can discuss with your attorney the services we can provide. Thank you, [redacted], CLPE Senior Consultant / Technical Manager."

60. Mr. Bruce Steadman's thoughts regarding the email from [redacted], CLPE Senior Consultant / Technical Manager of [redacted] & Associates, Inc., are as follow:

61. "As I see it, the good (?) news is that [redacted] at [redacted] and Associates did NOT say that they had to work with 'friction ridge characteristics', and by extension of this omission, they definitely appear willing to work with prints containing ONLY flexion creases. They appear to be a high quality, prestigious and capable company. In other words, [redacted] and Associates places themselves in [redacted]'s Category #1 - ***Those who believe that flexion creases alone can be used to positively identify an individual.***"

62. "I was disappointed, of course, in learning that the company work's only through attorneys and not directly for private individuals. However, if this 'infant-to-adult-footprint-comparison' case ever looks like it is going to a court hearing, getting an attorney involved would

be a natural first step. [redacted] has already told us that - ***The examination determined the presence of flexion creases readily visible.***"

63. "Thus, although it would have been nice, I don't think we really NEED a second expert opinion on the quality of the 'Pristine Image' footprint! IN OTHER WORDS - I think we have now done everything that we can reasonably do at present to prepare for a possible future court challenge to BHO-II on the footprint comparison matter."

X

X

X

Appendix I

(**Exhibit C**)

Infant to Adult Footprint Identification, Sinclair & Fox, Journal of Forensic Identification, Vol. 57, No. 4, July/August 2007 (pp. 485-492).

ISSN 0895-173X

Journal of Forensic Identification

Vol. 57
No. 4
July/August 2007

The Official Publication of the
International Association for Identification

International Association for Identification

www.theiai.org

Diana Castro, *President*

Joseph P. Polski, *Chief Operations Officer*
2535 Pilot Knob Road, Suite 117, Mendota Heights, MN 55120-1120
(651) 681-8566, Voice (651) 681-8443, Fax
email: iaisecty@aol.com

Journal of Forensic Identification

Alan L. McRoberts, *Editor*
Debra L. McRoberts, *Associate Editor*
P.O. Box 893789, Temecula, CA 92589-3789
(951) 587-8337, Voice (951) 587-8347, Fax
email: jfieditor@theiai.org

The *Journal of Forensic Identification* (ISSN0895-173X) is the official publication of the International Association for Identification and is devoted to publication of research and information about Forensic Identification in its various disciplines. These include Friction Ridge Skin Identification, Footwear and Tiretrack Examination, Firearm and Toolmark Examination, Questioned Documents, Polygraph Examination, Forensic Photography and Electronic Imaging, Forensic Art, Crime Scene Investigation, Blood Stain Pattern Identification, Forensic Laboratory Analysis, Forensic Odontology, Digital Evidence, and Forensic Anthropology. Matters of interest in other forensic disciplines, as well as Letters to the Editor, may also be published.

Editorial assistance in the preparation of accepted manuscripts will be provided after the editorial review. Reviews of manuscripts submitted for publication are normally completed within three months from receipt of the complete manuscript submitted according to the format specified in the instructions for submissions. Information for submissions can be found on the last two pages of this issue. The International Association for Identification, the Editor, and the Editorial Board assume no responsibility for the statements and opinions advanced in this publication.

The *Journal of Forensic Identification* (USPS 256-280) is published bimonthly and is the official publication of the International Association for Identification, with offices at 2535 Pilot Knob Road, Suite 117, Mendota Heights, MN 55120-1120. Periodical postage paid at Mendota Heights, MN 55120, and at additional mailing offices. Subscriptions per year: US member, $60.00; non-US member, $50.00; US student member, $30.00; non-US student member, $25.00; individual nonmember subscription, $130.00; institutional or library subscriptions, $155.00 in North America, $175.00 outside North America (all rates quoted in $US). Bookseller rates are discounted 10%.

POSTMASTER: Send change of address to: *Journal of Forensic Identification*, 2535 Pilot Knob Road, Suite 117, Mendota Heights, MN 55120-1120.

Case Report

Infant-to-Adult Footprint Identification

Rick Sinclair
Craig Fox

New South Wales Police
Fingerprint Operations
Forensic Services Group
New South Wales, Australia

Abstract: A case report involving the examination of an infant footprint against an adult exemplar to establish citizenship in the United States is presented. The size differential was eliminated through the use of enlarged ridge tracings which were used to demonstrate the comparison.

Introduction

The comparison of footprint records to establish positive identification of individuals is a universally accepted practice within the fingerprint science. There is no biological or physiological difference between the friction ridge skin on the palmar or plantar surfaces, and they each possess the same value for identification purposes. Generally, most cases concerning footprint identifications arise from the examination of latent footprints developed at crime scenes or on evidence connected with criminal offenses and involve adult-to-adult footprint comparisons.

Received May 24, 2006; accepted August 23, 2006

The recording of infant footprints after birth for the purpose of identification does not appear to be a routine practice around the world, and it seems to be done as more of a memento for parents. However, some hospitals in several states in the United States have a policy of footprinting newborn infants, ostensibly for the purpose of proving the identity of the baby in the event of a mix-up (or abduction of the child) at the hospital. There have been only a handful of reported cases where the comparisons of infant footprints have been used in criminal investigations [1-3]. Notably, each of these cases involved the comparison of the flexion crease detail in each of the infant footprints, because the fine friction ridge detail was insufficiently recorded on the hospital records because of poor recording practices.

Although it is certain that infant-to-adult footprint comparisons have been undertaken in the past, a search of the major forensic identification literature failed to locate any previously reported cases of this kind, either in Australia or elsewhere in the world. This fact became significant after the authors were tasked with carrying out an infant-to-adult footprint comparison at the request of the United States Consulate in Sydney.

Case Background

In May 2004, the New South Wales Police Forensic Services Group received a formal request from the United States Consulate in Sydney to record the footprints of an adult female and compare them with the footprint records taken from an infant born in the United States in 1979. The purpose of this request was to determine the veracity of the individual's application for a United States passport and recognition of United States citizenship, based on her claim that she was the infant referred to in the relevant birth records containing the infant footprints.

The applicant claimed that she had been born in the United States and had migrated to Iraq with her parents as a young child. Within the last few years, the applicant and her mother had fled Iraq for Australia without any current formal documentation to positively establish her identity. Temporary refugee status was subsequently granted by the Australian government, pending further investigations. A formal application for a United States passport was then lodged by the female concerned to the United States Consulate. She presented an unofficial United States

hospital birth certificate as supporting evidence of her identity. The unofficial birth certificate contained what the applicant claimed to be her left and right footprints, taken shortly after her birth in a hospital in the United States in 1979.

Authorities in the United States confirmed the authenticity of the applicant's birth certificate containing the infant footprints with the relevant hospital in the United States and established that the document and the names and signatures contained thereon were genuine. Based on this, the U.S. State Department accepted that the person matching the footprints on the certificate would be acknowledged as a citizen of the United States.

Acquisition of Infant and Adult Footprints

Detective Senior Constable Craig Fox of New South Wales Police Fingerprint Operations attended the United States Consulate in Sydney and took possession of the subject's birth certificate containing the infant footprint records (Figure 1). On initial inspection, the infant footprints contained on the birth certificate were found to be almost completely unsuitable for comparison purposes. Unfortunately, it appears that the medical staff who obtained the infant footprints exercised minimal care when recording the prints, resulting in smudged and over-inked prints, rendering most of the fine friction ridge detail illegible (a common problem identified in the literature) [1-4].

The only part of either infant footprint that appeared suitable for possible friction ridge comparison was one small area located directly below the big toe of the right foot (Figure 2), and enlargement photographs were later taken of this particular area to assist with the comparison process. Samples of the person's footprints were then obtained by utilizing a powdering and lifting technique, where a light coating of standard black fingerprint powder was brushed onto the ridged skin on the underside of both feet. Several recordings of each footprint were then carefully lifted, first with white adhesive labels and then with gel-lifters (Figure 3).

Figure 1

Infant footprints as recorded on the birth certificate.

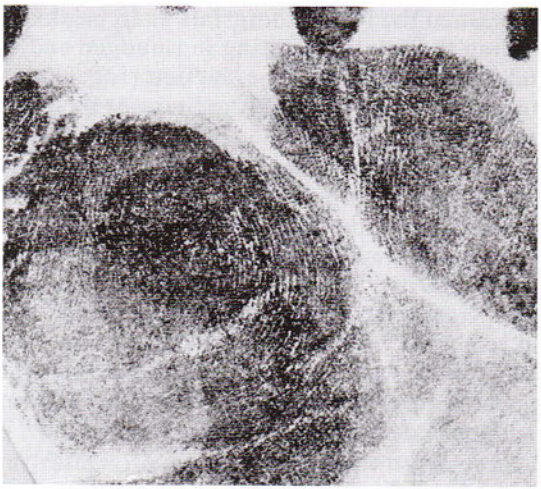

Figure 2

Enlargement of area below the right big toe.

Figure 3

Comparative sizes of the infant and gel-lift adult footprints.

Analysis and Comparison Method

Detective Sergeant Rick Sinclair of New South Wales Police Fingerprint Operations was then handed the task of analyzing and comparing the infant and adult footprints. Unfortunately, it was soon found that the poor clarity and limited quantity of friction ridge skin detail in the infant footprint, coupled with significant differences in size through expansion of the ridged skin due to growth, proved to make the comparison both challenging and problematic (Figure 3 shows a comparative size of both records).

As with all friction ridge comparisons, the process commenced with a thorough analysis being undertaken of all available friction ridge detail contained in the infant footprint at three levels: first level detail (pattern type and overall ridge flow and shape), second level detail (friction ridge characteristics), and third level detail (friction ridge shapes). Additionally, the paths and arrangement of the available flexion creases in the footprints were also noted during this phase of the examination.

Transparent tracing paper was placed over the enlarged comparable areas of both the infant and adult footprints, and the friction ridges were traced with pencil, noting overall friction ridge shape and flow (first level detail) and the relative location and relationship of the friction ridge characteristics present in each record (second level detail). Also recorded were the paths of available flexion crease detail present in both footprints. The end result of the tracings appeared to look somewhat like the striations of a fired bullet, with the relative lengths and paths of the friction ridges and the relationship of the friction ridge characteristics at the ends of each traced friction ridge being compared and evaluated in conjunction with the original images (Figures 4a and 4b).

Evaluation and Identification

Sufficient agreement was found at both first and second levels of detail. There was some minor third level detail present consisting of sweat pore formations; however, these were lacking sufficient quality and quantity for comparison purposes. Nonetheless, in excess of fifteen matching friction ridge characteristics were noted in both footprints in the same relative position and sequence with no unexplainable differences, establishing a positive identification (independently verified by another senior fingerprint expert). Interestingly, during the comparison it was noted that the paths of the available flexion crease detail present in both the adult and infant footprints were also found to be in agreement. This lends further support to the theory of palm and foot flexion crease persistency referred to in previous cases and research [5].

Figure 4a

Enlarged tracing of infant footprint.

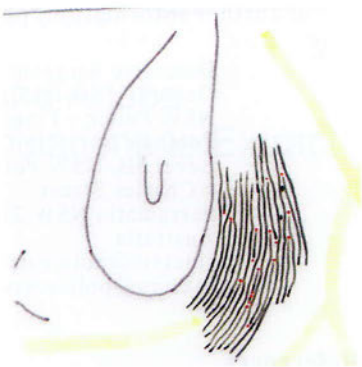

Figure 4b

Tracing of adult footprint.

Conclusion

As a result of this examination, the U.S. State Department accepted the identification and the applicant was granted a United States passport. She now resides in the United States. Significantly, inquiries made by the U.S. State Department in Washington D.C. revealed that this method of identification has never before been used by them to verify a United States citizenship or passport applicant's identity. As indicated in the introduction, while undoubtedly cases similar to this have occurred in the past, a search of the major forensic identification literature failed to reveal any previously reported infant-to-adult footprint identification cases. The authors would most certainly be interested to hear about the experiences of any practitioners who have handled similar cases in the past.

For further information, please contact:

Detective Sergeant Rick Sinclair
Detective Senior Constable Craig Fox
NSW Police - Fingerprint Operations
Forensic Services Group
Level 4B, NSW Police Headquarters
1 Charles Street
Parramatta NSW 2150
Australia
sinc1ric@police.nsw.gov.au
fox1cra@police.nsw.gov.au

References

1. Blake, J. W. Identification of the New Born by Flexure Creases. *Ident. News* **1959**, *9* (9), 3-5.
2. Ortlee, M. An Evaluation of Infant Footprinting. *Ident. News* **1964**, *14* (7), 4, 11.
3. Lohnes, R. C. Infant Footprint Identification by Flexure Creases. *Ident. News* **1986**, *36* (8), 10-13.
4. Taylor, R. A. "Flexure Creases" Alternative Method for Infant Footprint Identification. *Ident. News*, *1979*, **29** (9), 12-14.
5. Massey, S. L. Persistence of Creases of the Foot and Their Value for Forensic Identification Purposes. *J. For. Ident.* **2004**, *54* (3), 296-303.

Appendix II

(**Exhibit D**)

[redacted] emailed evaluation results (June 6th, 2013)

XFINITY Connect **steadmanm@comcast.net**

± Font Size -

Infant Footprint

From : [redacted] Thu, Jun 06, 2013 01:27 PM

Subject : Infant Footprint

To : steadmanm@comcast.net

Hello Mr. Steadman:

I have completed my examination of the electronic scan depicting a footprint per your request. I do not detect any friction ridge characteristics (unique characteristics on the skin of our feet and hands) in the scan. This, as you know, is not unusual as the individuals who take the footprints of infants at birth are not skilled in the process.

I know you have read an article(s) concerning footprint identification and that you are aware that some believe the creases in the footprint (commonly referred to as "flexion creases) could be used in the identification process. Essentially, there are three schools of thought in this regard:

1. Those who believe that flexion creases alone can be used to positively identify an individual.

2. Those who believe that flexion creases alone cannot be used to positively identify an individual.

3. Those who believe flexion creases coupled with visible ridge characteristics of friction ridge skin can be used to positively identify an individual.

I fall into category # 3. Without the presence of visible ridge characteristics, I'm afraid your footprint is of no use in a comparison examination with a known footprint.

I hope I have been clear in my explanations and I wish you good luck in the future.

Regards,

[redacted]

Appendix III

(**Exhibit E**)

[redacted] hardcopy evaluation results, "Report of Latent Print Evaluation"

(June 10th, 2013)

[redacted]

Certified Latent Print Examiner

[redacted]

[redacted]

[redacted]

Certified By
The International Association for Identification

REPORT OF LATENT PRINT EXAMINATION

This report pertains to forensic examination conducted at the request of Mr. Bruce Steadman, 2548 Midvale Forest Drive, Tucker, GA 30084.

Items Examined

One electronic scan depicting one right footprint. Per Mr. Steadman, the footprint is that of an infant. The scan did not depict a measuring device without which the actual size of the footprint could not be determined.

Examinations Requested

Examine the scan of the footprint to determine the presence of friction skin characteristics that could be used in a future comparison examination with a known footprint.

Results of Examination

Examination of the scanned footprint did not reveal the presence of friction ridge characteristics that could be used in a comparison examination. Note: It is not unusual for infant footprints to not depict friction ridge characteristics as medical personnel recording the footprint are not trained or skilled in recording impressions of friction ridge skin.

The examination determined the presence of flexion creases readily visible. It is the undersigned's opinion, however, that comparison examinations utilizing flexion creases alone as a means of positive identification (particularly those depicted in a new born infant's footprints) should not be attempted without the presence of friction skin characteristics to compare as well.

[redacted]

[redacted], CLPE
06/10/2013

[redacted]

[redacted]
IAI Certified Latent Print Examiner

[redacted]

Appendix IV

(**Exhibit F**)

The digital scan of the footprint (right foot) contained within defendant BARACK HUSSEIN OBAMA II'S Coast Province General Hospital birth certificate, and examined by IAI (International Association for Identification) Certified Latent Print Examiner, [redacted].

INDEX