

## Skeletal Material Associated With the Lindbergh Kidnap Case

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**ABSTRACT** In the late 1970s and early 1980s an attempt was made to reopen the Lindbergh kidnap case. On May 25, 1977 Dr. Krogman x-rayed and examined the twelve (12) bones associated with the Lindbergh case which were supplied to him by the New Jersey State Police. On June 14, 1982 I made an examination of the same twelve (12) bones and took anthropometric measurements and photographs. I had been asked to look at the material by the lawyer representing Mrs. Hauptmann, widow of the convicted kidnapper, Bruno Hauptmann. Of the twelve (12) bones, ten (10) are human and two (2) are animal. Each bone is identified and a description and anthropometric measurements are given. The bones examined are from the hands and feet and are consistent with the skeletal development of a 20-month-old male.

My forensic career began as a result of an early morning vehicle accident outside of Frankfort, Kentucky, in the early winter of 1953. Two trucks ran together in a crash that resulted in a fire. When the fire was out, three bodies "burned beyond recognition" were recovered. The drivers of both vehicles were known, but the identity of the third individual was unknown. Eventually this third individual was buried as the common-law wife of one of the truck drivers.

Some six months after this event, the Saturday Evening Post carried an article on Dr. Wilton M. Krogman as an international "bone detective." In this article Dr. Krogman mentioned a few other anthropologists (this was long before the term Forensic Anthropologist was used) who also identified human skeletal remains. One of those mentioned was my major professor in Anthropology at the University of Kentucky, Dr. Charles E. Snow. Charlie Snow and Bill Krogman had long been friends and their interest in physical anthropology overlapped in the area of skeletal biology and especially in human identification.

A lawyer, familiar with the truck accident, read the article and realized that the third and unidentified individual could possibly be identified. He called Dr. Snow and asked if Dr. Snow would help in making a positive identification. The answer was yes, and Dr. Snow asked if I would be interested in accompanying him on a human identification case. I can still remember my excitement because

of the opportunity to apply techniques I had been studying and reading about.

The necessary legal forms were completed to have the body exhumed. On a hot day in late April of 1954, Dr. Snow and I drove to a small cemetery in east central Kentucky. The cemetery was associated with a church. An unofficial "hearsay" identification had been made, although no one had seen the woman enter the truck with the driver. The night before the accident, neighbors had overheard a conversation when the unidentified woman said she was going to Louisville the next day with the driver of one of the trucks involved in the wreck.

By the time Dr. Snow and I arrived at the cemetery the grave had been excavated and the coffin uncovered. The coffin was immersed in water and pulled up out of the water for our investigation.

The lawyer paid Dr. Snow \$25 from which Charlie gave me \$5 for gas and use of my car. I am sure the lawyer made a considerable amount since the driver of one truck (owned by The Great Atlantic and Pacific Tea Company, A&P Company) was at fault and veered across into the left lane hitting the truck with the two occupants head on. I was fascinated that you could make a positive identification from bones. The human identification area interested me so much that I decided to concentrate in the forensic area

for my doctoral work. Although I applied for, and was accepted in the Ph.D. programs at Harvard and the University of Michigan, I knew the only doctoral program suited to my interests was at the University of Pennsylvania with Dr. Krogman.

Before joining Dr. Krogman at the Growth Center in Philadelphia, I spent the summer at the Smithsonian Institution where I analyzed human skeletal material recovered from river basins that were to be flooded. Dr. Krogman recognized the importance of this skeletal material and allowed me to return to the Smithsonian for the next three summers (1957-1959). In addition, my doctoral dissertation (Bass, 1964) was written on this material.

Shortly after my arrival at the University of Pennsylvania in September of 1956, Dr. Krogman fell down the stairs at his home and was in the hospital for weeks with several additional months needed for recovery at home. During this time, Dr. Krogman was living west of Philadelphia. My wife and I also had an apartment west of Philadelphia in Yeadon, some 8-9 miles from Dr. Krogman. I offered to drive him to and from work, and Dr. Krogman accepted. This relationship lasted until I completed my academic training and left in December 1959 to accept my first teaching position at the University of Nebraska.

Except for one course, most of my training from Dr. Krogman was of a tutorial nature. Krogman would assign me readings and would discuss these readings as we drove back and forth to work. Dr. Krogman had a fantastic ability to remember authors, dates, and places of publications as well as the information in the article itself. His ability to integrate knowledge from many sources and relate this knowledge to problem solving was phenomenal. I always felt inadequate, although Dr. Krogman never made me feel inferior.

He taught me a technique of human identification that I continue to use with my students. When an identification case would come in, Dr. Krogman would examine it first, make his judgments, say nothing, and then he would ask me to look at the case and formulate my own opinions. We would compare our findings and he would make me support and document from recent literature my statements. We often would have long discussions about better techniques for determining the age, race, and sex of skeletal

material. He would always be surprised when I found something that he had not seen, an event that did not occur very often.

He not only shared with me the research supporting a certain technique but also provided history of the researcher and a discussion of the sample skeletal populations used for the study. Krogman had known most of the people publishing in physical anthropology personally and had looked at, or participated in collecting, the specimens used as comparative samples.

Dr. Krogman's personal integrity was above reproach, and he was straight-forward in his dealings with people. His work habits were exemplary—he was a task master. However, he had a great sense of humor and had several jokes to share each day. It was always an exhilarating experience to be around him. What an example he set for us as scholars and as human beings!

One cold and snowy evening in Philadelphia I received a telephone call from Dr. John Champe, the Chairman of the Anthropology Department at the University of Nebraska in Lincoln. Champe had money for a teaching and research position which he said could be for a week, a month, or a semester. I spoke to Dr. Krogman about leaving, and he said that a week or a month would not do me any good. He noted that I was "mature enough now to try my own wings," and that I should tell Dr. Champe that I would come for a semester. Thus, in January of 1960 I started teaching at the University of Nebraska and my day to day contact with Dr. Krogman came to an end. I completed my Ph.D. the following year but continued to keep close contact with Dr. Krogman.

I chose the Lindbergh case for the session honoring Dr. Krogman since, as far as I know, he and I are the only two Forensic Anthropologists who have ever been allowed to look at the remaining material.

In the late 1970s and early 1980s an attempt was made to reopen the Lindbergh kidnap case. On May 25, 1977, Dr. Krogman x-rayed and examined the twelve (12) bones associated with the Lindbergh case which were supplied to him by the New Jersey State Police. On June 14, 1982, I made an examination of the same twelve (12) bones and took osteometric measurements and photographs. I had been asked to examine the material by the lawyer representing Mrs. Hauptmann, widow of the convicted and executed kidnapper.

TABLE 1. Osteological contents of the five vials (author's numbers)

Vial I. A small vial containing four bones labeled "Taken from 3 baskets of leaves 4 bones of foot"	
Bone Number	Identification
1.	Longest bone in vial. Decayed material (possibly dirt mixed with grease) still adheres to bone. Hair attached. A left first metatarsal (big toe).
2.	Second longest bone in vial. Probably a left fourth (4th) metatarsal. Could possibly be a left fifth (5th) metatarsal.
3.	Proximal phalanx of right middle (possibly index) finger. The bone is greasy and has some tissue adhering to the proximal end of the bone where one hair is also attached.
4.	Proximal phalanx right index (possibly middle) finger. Bone feels greasy.
Vial II. Labeled "Bone taken from burlap bag 022"	
5.	This vial is broken and has been repaired by clear tape. It contained one bone, a right fifth (5th) metacarpal.
Vial III. Labeled "Taken from 3 baskets of leaves calcaneus bone"	
6.	Left calcaneus of a child. Bone closely matches Plate 10 (male, skeletal age 24 months) of Hoerr et al. (1962).
Vial IV. Labeled "Taken from 5 bags of dirt 4 human bones"	
7.	Proximal phalanx right ring finger.
8.	Left fifth (5th) metatarsal. Dirt adheres to bone.
9.	Possibly a left fifth metacarpal. Bone is from the hand and proximal row of phalanges but side and digit number are difficult to determine.
10.	Left second metacarpal.
Vial V. Labeled "Taken from 3 baskets of leaves Rib bone"	
11.	Vertebral arch (from spinal column). The bone is damaged and a canine tooth mark is present. The epiphyses are unattached. Probably nonhuman.
12.	Nonhuman sternal end rib fragment. Vertebral end is missing. Bone is crushed and broken about mid shaft, possibly by canine activity. Dog (canine tooth) mark is present on outer surface. Decaying material is attached to the broken end.

TABLE 2. Forensic analysis of bones

Vial number	Bone number	Identification	Measurements in millimeters		
			Length	Shaft diameter Maximum	Minimum
I	1	Left first metatarsal (FOOT)	24.5	5.5	4.5
	2	Left fourth metatarsal (FOOT)	21	4	4
	3	Proximal phalanx right middle finger (HAND)	20	6	3
	4	Proximal phalanx right index finger (HAND)	18	6	3
II	5	Right fifth metacarpal (HAND)	19	5	4
III	6	Left calcaneus (FOOT)	33	—	—
IV	7	Proximal phalanx right ring finger (HAND)	19	6	3
	8	Left fifth metatarsal (FOOT)	21	4.5	4
V	9	Left fifth metacarpal (HAND)	20	4.5	4
	10	Left second metacarpal (HAND)	26	5	4
	11	Vertebral arch (animal)	14	5	—
	12	Rib fragment (animal)	47	7	—

The body of a baby was found on May 12, 1932, about 4½ miles from the Lindbergh house near Princeton, NJ (Kennedy, 1985). The remains were in an advanced stage of decomposition. The left leg was missing below the knee, as were the left hand and right arm. The body was taken to the morgue and identified as Charles A. Lindbergh, Jr. and subsequently cremated. The police returned to the scene and raked up the leaves and items surrounding where the body had been

found. This material was placed in ten barrels which were carefully inspected. There were 12 bones recovered from the debris.

When I examined the material in June 1982, a total of twelve (12) bones were contained in five (5) glass vials with cork stoppers. The vials were not numbered but did have labels. For my analysis I numbered the vials and included the label on each. I also numbered the bones. A short description of each bone is given below. The bone's identi-

*Skeletal Development  
of the  
Hand & Wrist*

*Male Age: 24 Months*

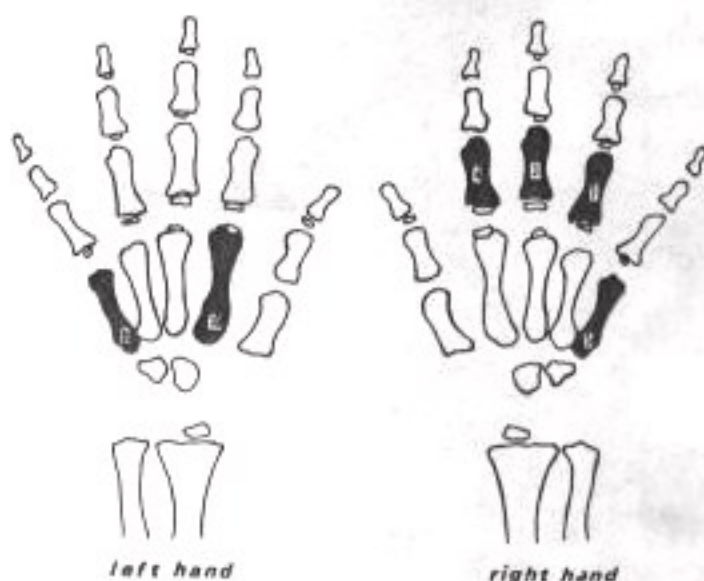


Fig. 1. Skeletal development of the hand and wrist of a 24-month-old male (traced from Greulich and Pyle, 1950). Bones recovered are in black.

*Skeletal Development  
of the  
Foot*

*Male Age: 24 Months*



Fig. 2. Skeletal development of the foot of a 24-month-old male (traced from Hoerr et al., 1962). Bones recovered are in black.

fication and its measurements are presented in Tables 1 and 2, respectively. Bones of the hands and feet that were recovered are located in Figures 1 and 2.

Of the twelve (12) bones examined, ten (10) are human and two (2), a vertebral arch and a rib fragment, are animal. Four bones are from the right hand, three from the first or proximal row of phalanges, and the fourth is the right fifth metacarpal. There are two metacarpals from the left hand, and the remaining four bones are from the left foot.

All ten (10) human bones are from a child whose biological (skeletal) age is between 18 and 24 months at time of death. Most of the maximum lengths of the foot bones are slightly under the maximum length of similar bones of a 24-month-old male (Hoerr et al., 1962, Plate 10, p. 81). Measurements of the maximum length of the hand bones are either equal to or slightly less than maximum lengths of similar bones of a 24-month-old male (Greulich and Pyle, 1950, Male Standard 8, p. 77).

The bones examined are consistent with the skeletal development of a 20-month-old male. Epiphyses on none of the bones were

present or attached, indicating a subadult individual (young child). There is no evidence present in the bones examined as to cause of death.

I have on file Dr. Krogman's report which he sent me following my examination. Our reports were similar in their conclusions.

#### ACKNOWLEDGMENTS

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