

#28 Study of remains discovered at
mile marker 130 site
(Adam Walsh)

INVESTIGATIVE REPORT #28

TO: RALPH J. RAY, JR.
Chief Assistant State Attorney

FROM: PHILIP J. MUNDY
Investigator

SUBJ: Study of Remains Discovered at Mile Marker 130 Site

RE: Homicide Investigation of Adam Walsh

ENCL: 1) Report of Dr. Jason H. Byrd, University of Florida,
dated March 24, 1998

Adam Walsh was kidnapped on Monday, July 27, 1981. Fourteen days later, on Monday, August 10th, the head of Adam Walsh was recovered from a canal at what was then mile marker 130 of the Florida Turnpike. In reviewing this case the question arose as to why there seemed to be a lack of damage to the head and face from either insect, marine life, or bird life. This question of course leads us to ask if Ottis TOOLE's claim that he threw the head in the water on the same day as the murder could stand up to scientific scrutiny. In an effort to resolve this matter inquiries were made to several expert sources.

Early in our investigation Dr. Joseph DAVIS, Chief Medical Examiner (ret.), Dade County, Fl. was consulted, and as with all other experts, all factual material known to us was made available to him. Addressing the condition of the victim's remains Dr. Davis' response was that the head could have been in the water for two weeks, but if so he would be surprised. Dr. Davis pointed out that many variables would have to be considered in offering an opinion on the lack of damage to the remains from any kind of life that might have fed on it but offered no theories.

Dr. Franklin COX, M.D., Associate Medical Examiner (ret.), Indian River County, Fl. was the first medical official to examine Adam Walsh's remains early on the morning of July 28, 1981. Dr. Cox was contacted and clearly remembers this case. Dr. Cox candidly responded that he honestly never considered the question of damage, or lack of damage, to the remains from environmental sources, and he frankly did not feel qualified to offer an opinion for the record.

Dr. Wayne LORD of the F.B.I. Forensic Science Unit was queried as to their possible assistance in this matter. Dr. Lord recommended that we seek the services of Dr. Jason BYRD, Department of Entomology, University of Florida.

SAO INV. #96-02-262
Inv. Philip J. Mundy
Page Two/Memo #28

Dr. Byrd consented to assisting us and he was provided with all the necessary information available to conduct his study.

Dr. Byrd's findings are attached as enclosure 1). Basically his conclusions are:

1. The remains could have been submerged for up to 12 to 14 days.
2. The lack of insect activity indicates the head was on the surface for 24 hours or less.

From an investigative standpoint Dr. Byrd's findings indicate TOOLE's claim of disposing of the head on July 27th is possible. The men who found the head, Mr. Bailey and Mr. Hughes, did not see the head on August 9th, and Dr. Byrd's findings provide credence to this information.

Dr. Byrd informed me that he is not qualified to remark on the absence of activity from marine or bird life, but recommended we consult with Dr. William RODRIGUEZ, Medical Examiner, Armed Forces Institute of Pathology, Washington, D.C.

Dr. Rodriguez was consulted and provided with the known facts of the case including Dr. Byrd's conclusions. Dr. Rodriguez concurred with the findings of Dr. Byrd.

Regarding the lack of molestation to the remains from any other sources Dr. Rodriguez said that this does not surprise him at all. Our conversation included aquatic animals, fish, alligators, crustaceans, and birds. Dr. Rodriguez states that there are many variables but basically it comes down to what type of life is present in the environment, are they in a foraging state, and is there a sufficient quantity of their normal diet for them to ignore what is basically a foreign food source. Dr. Rodriguez pointed out that criminal and medical investigators often erroneously conclude that because of an absence of animal or fish feeding on a cadaver then the remains must have only recently been deposited.

Given the facts Dr. Rodriguez states that the evidence we have is reasonable, fits the time period for submergence and surface time of 24 hours or less. Dr. Rodriguez remarked that the absence of damage to the head from carrion crows reinforces the surface time estimate of Dr. Byrd, and if anything would have been less.

Taking advantage of this consultation with Dr. Rodriguez he was also provided with the circumstances of the Radebaugh Road scenario and asked his opinion. Stipulating certain variables, he believes the remains would have been gone from the original site in a short time, particularly in dealing with the remains of a child versus an adult.

SAO INV. #96-02-262
Inv. Philip J. Mundy
Page Three/Memo #28

The results of this study into the condition of the remains discovered on August 10, 1981 at mile marker 130 appear to satisfy the concerns expressed on this subject.

Philip J. Mundy
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cc: Det. John Kerns, Hollywood P.D.

ENCLOSURE ONE



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March 24, 1998

Philip J. Mundy
Investigator
State Attorney's Office
Seventeenth Judicial Circuit of Florida
Broward County Courthouse
201 S.E. Sixth Street Room 630
Fort Lauderdale, Florida 33301-3360

Dear Mr. Mundy,

Enclosed you will find the documents sent to me on January 28, 1998 concerning the Adam Walsh murder investigation. All items sent to this office have been returned and are itemized below:

1. Photographs #1-10 and scene notes.
2. Autopsy photographs 31,2,3,5,6, and 7.
3. Copy of autopsy report of Dr. Franklin Cox, Indian River, Florida Medical Examiner.
4. Copy of a report issued by Spectrum Laboratories.

As per your request, I examined the photographs for evidence of insect activity and reviewed all notes for any reference to such activity made by either the investigators or the Medical Examiner. I noticed no evidence of any insect activity in the photographs, nor was such activity referenced in any written reports submitted to this laboratory. The conspicuous lack of insect activity is worthy of note as it would indicate that only a short interval, probably 24 hours or less, existed between the time the remains were exposed to insect activity and discovery of the remains on August 10, 1981. Exposure to insect activity occurred once the remains surfaced in the canal, and there is no reason to expect that insect colonization would not have occurred during daylight hours on the first day of surfacing.

The question that remains is how long it would take the decomposing remains to surface. I found the soft tissues in this case to be rather well preserved in comparison to my other experiences with decomposing human remains. Typically, human remains exposed to the environment for a maximum duration of 14 days (as suspected in this case) have undergone extensive decomposition. However submersion in an aquatic environment

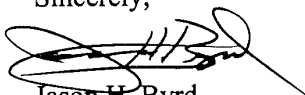
will slow the decompositional process, and the salt content of the water can further affect the rate of decomposition. As a general rule, submersion in an aquatic environment will slow decomposition to a rate only half that which would occur in a terrestrial environment. Therefore, there are periodic reports of human remains being rather well preserved after prolonged submersion intervals.

My area of expertise does not lie within forensic taphonomy or pathology, but in dealing with decomposing remains almost daily with my work in forensic entomology I would like to offer the follow information for your reference.

After my examination of this case I believe that a submersion interval of 6-14 days could have occurred. This interval can be further refined to encompass a 12-14 day interval based on the statements of Dr. Cox and the amount of skin slippage visible in the scene photographs. This conclusion is based on the amount of skin and hair slippage visible on the face and scalp in the photographs provided and the written comment (by Dr. Cox) of skin slippage being almost "total. In my cases I have found that skin and hair slippage usually begins on days 3-4 and is complete by days 6-7 under the typical climate for Florida during the months of July and August. Dr. Bill Bass, Forensic Anthropologist and Director of the Anthropological Research Facility at the University of Tennessee agrees with this statement, and has found similar time intervals for human research subjects in Tennessee. Given the fact that these remains were submerged, and that submergence slows decomposition by a factor of two, you have a possible total submergence interval of 6-14 days. With Dr. Cox's statement of nearly total skin slippage, the possible submergence interval would probably be a full 12-14 days in order for skin slippage to become so advanced and total in coverage. It is also widely known that once a submerged body is removed from its aquatic environment, decomposition proceeds at an increased rate. This rapidity of change was noted by the investigators on scene who remarked that the tissues were changing color during the course of scene processing.

In conclusion it is my opinion that the remains were submerged for a maximum range of 6-14 days, with a 12-14 day interval being a distinct possibility when factoring for skin slippage. It is also my opinion that the remains were discovered 24 hours or less from the time of surfacing.

Sincerely,



Jason H. Byrd
Department of Entomology
Institute of Food and Agricultural Sciences
University of Florida