

Mitzi Roberts:

This is actually like a perfect location with the hidden driveway and the detached bungalows.

Unknown Voice:

Okay guys, I think they're ready. Okay.

Michael Connelly:

Seventy-nine years ago today, Elizabeth Short was tortured and murdered, her body discarded in a vacant field in Los Angeles. In death she became known as the Black Dahlia, the girl who was cut cleanly in two.

The horror of what happened to her lead to one of the largest and widest investigations ever mounted by the Los Angeles Police Department. Some have called it a state-of-the-art investigation for its time in 1947, others look back and see it as flawed with leads unfollowed and suspects not exhaustively pursued. Either way, no one was ever brought to justice for the killing of Elizabeth Short.

One thing that stands out very clearly from the police reports and media accounts of the day is that the investigators put a high priority on finding the so-called murder room where Short was tortured and killed. The place where her body was bisected, drained of blood, and thoroughly washed before being taken to Leimert Park and discarded by the side of the road.

But, as with the suspect, the place where Elizabeth Short took her last painful breath was never found.

Maybe until now. Citizen Sleuth Alex Baber believes he has found it, be it 79 years too late. And we're going to go there with him today. You're listening to Killer In The Code: Solving The Black Dahlia & Zodiac Cases. I'm Michael Connelly and this is Chapter 5.

A quick recap here of where we are at. With the help of an AI program, public records, genealogy sites and self-taught cryptography skills, Alex Baber spent nine months wading through millions of possible names and solutions to the most tantalizing of ciphers left behind by the so-called Zodiac killer of Northern California. That was the Z13 – so named for its 13 characters, a cipher so short it was said to be unbreakable. Also known as the My Name Is cipher because the Zodiac claimed to have encrypted his name in its 13 letters and symbols.

In a solution that has now been independently confirmed by some of the top cryptographers in the world, Baber came up with the name Marvin Merrill, which in turn was one of a number of aliases used by Marvin Margolis, a prime suspect in the 1947 murder of Elizabeth Short, better known as the Black Dahlia.

Margolis died in Santa Barbara in 1993. In his last year, while dealing with a terminal cancer diagnosis, he drew a sketch entitled "Elizabeth" which depicted a nude young woman with dark hair. Signed Marty Merrill, another Margolis alias, and dated 1992, the sketch shows her from the waist up, eerily matching the bisection of Elizabeth Short. There are also accent lines on the torso that are similar to lacerations documented during Short's autopsy. When Baber applied light filtering software to a photo of the sketch, he found a word hidden in the dark shading surrounding the torso. The word was zodiac.

Following these discoveries, Baber pulled together a team of professional investigators to continue his efforts on the cases. The team included cold case Detective Rick Jackson and Mitzi Roberts, who retired from the Los Angeles Police Department as supervisor of the cold case unit. She was also the custodian of the Black Dahlia case files for the last 15 years of her career.

An update on the Elizabeth sketch is that Margolis's son turned the sketch over to Baber's team for professional analysis. Roberts took it to an independent forensic analyst named George Reis of Imaging Consultants. During his 90-minute study of the sketch witnessed by Roberts and myself, Reis, who donated his time to the project, used several different lighting and filtering techniques to confirm the existence of the hidden word.

Reis was also able to determine that the hidden word was added to the sketch with a pencil as were several other shadings and highlights on the piece. Graphite shading around the marks on the torso give it the appearance of a blood smear. You can see the sketch for yourself on KillerInTheCode.com. Because the graphite from the pencil overlays the black marker used to create the main image of the sketch, it appears that the pencil was used to add final accents to the piece.

Curiously, when Reis removed the sketch from its frame for the analysis, he found another sketch beneath it. It was possibly added to keep the Elizabeth image from slipping in its matted frame. The new sketch is both sides of a piece of paper and depicts four versions of neckties that say Ross Perot For President. In a way it helps date the Elizabeth sketch because Perot unsuccessfully ran for president of the United States in 1992, Margolis's last full year of life.

We also have some updates regarding the work done on the Zodiac codes. We reported in Episode 4 that an amateur cryptographer in Stockholm, Sweden, took Alex Baber's methodology for breaking Z13 and applied it to what is known as Z18, which refers to the final 18 characters of the Zodiac's first cipher, Z408. That cipher was largely decoded way back in 1969 shortly after it was sent in three parts to three different Bay Area newspapers. However, the last line of the cipher was not decoded and thought for decades to be extra symbols, fill added to make the three parts equal in length. But a pattern analyst named Thomas Hefner in Stockholm used Baber's method and found it to include the name Marvin Merrill.

Now the independent team of former NSA codebreakers brought in to backcheck Baber's code work have analyzed Hefner's work. They have concluded that using three different methodologies of code breaking, including Baber's, the de-encryption comes back to Marvin Merrill on Z18.

Here is Ed Giorgio, former chief codebreaker for the NSA, and leader of the independent team of cryptographers that agreed to back check Baber's work.

Ed Giorgio:

It is certainly getting solid by the day. As I mentioned, the simple intersection of the possible names under the Baber solution with potential suspects in either case only has one name on it. It's Marvin Merrill. So even before I go to the new evidence, Marvin Merrill is a very strong candidate. Now, we showed earlier that when Patrick Henry discovered the keyword Elizabeth, that made it even more likely. And now we have additional confirmation from Thomas Hefner. His initial observation, which was later,

as I mentioned, extended by Patrick and Rich, is yet another confirmation that we have it correct. So, the bottom line is that when you look at the combination of two cipher messages, one name, one keyword Elizabeth, one encryption method, and the potential keyword Cheri Jo. And so, the evidence went from likely to very likely, to very, very likely, to almost beyond a shadow of a doubt likely.

Michael Connelly:

And from Sweden we go to Australia where a longtime Zodiac analyst named Paul Brookbanks has confirmed Baber's interpretation of Z32 and taken it a few steps further. A landscape architect by trade, Brookbanks has been fascinated by the Z32 because of the clues supplied by the Zodiac, saying that the cipher concerns radians and measurements on a map. The solution Brookbanks independently plotted matched Baber's, which charted a path on a Zodiac provided map to Mountainview Cemetery in Oakland, the place where Elizabeth Short is buried.

Paul Brookbanks:

We do indeed get Mountainview Cemetery. So that's a plausible and even compelling location.

Michael Connelly:

You can go to our website for a link to Brookbanks' YouTube channel where he discusses Z32 and other aspects of the Zodiac case.

Now let's go back to the search for the scene of the crime, the place where Elizabeth Short met her demise. I say up front that we are speculating here, based on the facts of the original investigation into the death of the Black Dahlia.

Short's bisected body was found January 15th, 1947, alongside South Norton Avenue in an area known as Liemert Park. It was less than two years since the end of World War II and the eve of the massive post war growth the city would see. The area where the body was discarded was not yet fully developed. Crime scene photos show a vast emptiness surrounding the spot where Elizabeth Short's body was found. Captain Jack Donahoe, who was in charge of the investigation for the LAPD, said the area was known as a lovers' lane. There would be an eerie corollary to this 22 years later when the Zodiac would start shooting couples in remote lovers' lane areas in the North Bay.

From the start, the police mounted a strong effort to find the place where Short was tortured and killed. It was suspected that she was likely bisected in a bathtub, her body scrubbed afterward with a stiff brush that left coconut bristles on her body.

Here is veteran homicide investigator Rick Jackson.

Rick Jackson:

To know where a murder took place, the crime scene, it would be a major thing to have. You have potential for witnesses. You have potential for tons of forensics, especially in a case like this. So, there are so many things that can be gleaned from having that answer in an investigation.

Michael Connelly:

During the initial stages of the investigation, Captain Donahoe sent a phalanx of officers, a mix of detectives and uniformed officers, into the area where the body was found, to question nearby residents

and attempt to find the killing room. Eventually the search expanded and Donahoe later told reporters that it was believed that Short was likely slain outside of the populated areas of the city and then brought back to the field on Norton Avenue.

Two days after the murder the Los Angeles city council put up a reward of ten thousand dollars for information leading to an arrest in the case. Rewards often bring in calls from the cranks and the crazies. Here's Rick Jackson again.

Rick Jackson:

To control a reward, it can be a nightmare. You're going to get a lot of people calling, especially on a high-profile case like this. It's time consuming. But it doesn't hurt to try if you strike out because the worse that can happen is you don't get anything and then the money's not spent but yet you're shut out from getting any helpful information.

Michael Connelly:

When three different people report the same thing, you take notice.

Operators of three different motels in the South Bay area reported that on the night of the murder, a nervous young man came to their motel and asked if their rooms had bathtubs. He said that his wife was ill and under doctor's care and needed to use a tub. In each incidence, the motel employees said they noticed that the man had parked a black 4 door sedan a good distance from the motel.

Rick Jackson:

A crucial call on crucial information like this where three independent non-connected people call in with the same type of information, that's huge.

Michael Connelly:

Keying on the idea that Short's body may have been bisected and washed in a bathtub, the focus of the investigation shifted to the South Bay.

The three motels were clustered along a stretch of what was Route 165, which would later become the Harbor Freeway. All three of the motel operators gave the same description of the quote "jittery, nervous man" seeking a room with a bathtub. He had bushy blonde hair, was five foot nine, and 21 to 23 years old.

On the night Elizabeth Short was murdered, Marvin Margolis was 21 years old. His military records place him at five foot ten. Though in later photos he has light brown hair, he was described to police by at least one person who knew him back in 1947 as having blonde highlights or dirty blonde hair.

Alex Baber:

All the accounts are between 21 and 23 years of age and Marvin is right in the middle of it. So, he's literally a fitting description. Had they said 25 to 30, that would have been an obstacle we'd have to overcome. But for them to independently give the same age range across the board is very compelling to us, as far as investigators. They knew that this guy was younger, and they anticipate him being in his early twenties.

Michael Connelly:

Two weeks after the murder another citizen came forward, an investigator for the DMV, who said on the night of the murder that she had been waiting at a bus stop just northwest of the three motels. She said a blood curdling scream drew her attention to a passing car, a black four door sedan, where she saw a woman struggling with a man in the back seat while a second man was driving and a second woman was in the front passenger seat.

Could that have been Elizabeth Short trying to escape from her ex-boyfriend Marvin Margolis? If so, it meant Margolis had accomplices. We'll talk about that possibility later in the podcast.

What Alex Baber did with this information was chart these four reports on a map that also included Elizabeth Short's final destination on South Norton Avenue.

These stops showed that the man looking for a bathtub was moving south from motel to motel. But the report from the DMV investigator included her observation that the car was heading north.

Alex Baber:

What I did is I took a map and I took two pins and I put a pin at the corner of San Antonio and Orange which is where Arlene Donaldson said she witnessed the account. I put a pin in Leimert Park, where her body was discovered the next day. You connect the yarn. I searched out using the archives of any motels, hotels, or auto courts within that area.

Michael Connelly:

He came across an advertisement in a local paper that caught his eye. It was the announcement of a new motel opening in June of 1946. It offered one-bedroom bungalows with a bath. And it was called the Zodiac Motel.

Alex Baber:

That was a, one of those moments we refer to as an aha moment. Once I noticed the name and the correlation between what we uncovered with Marvin in North Bay and then the motel, at that moment I was on the track of, okay, this could be a possibility as being an inspiration or a origin of the moniker. At that point, once I identified the details about the rooms being individual and the motel having bathtubs, I knew then that this was the location Elizabeth Short was murdered at.

Michael Connelly:

Baber's confidence aside, there are no records available from the Zodiac Motel that would confirm whether Marvin Margolis ever checked into one of its bungalows. It also was not clear whether the advertisement of a bath meant a bathtub or an in-unit bathroom.

Still, when you consider the secret word hidden in the Elizabeth sketch and Margolis's alias being found in two of the Zodiac ciphers, it's a coincidence that cannot be easily dismissed.

That's why Baber and members of his team went there on a recent morning to see and get a feel for the place for themselves.

Yes, the twenty-two bungalows of the Zodiac Motel still stand on North Santa Fe Avenue in Compton, though they were converted to apartments long ago. They are neatly kept and painted in warm colors. Two opposing rows of eleven free standing bungalows with bars on their windows.

If Margolis brought Elizabeth Short here 79 years ago at the end of a night's search for a room with a bathtub, then he lucked into finding a place, on the fly, that would have been most suitable for murder.

It was called a motor court in 1947, the kind of place that served a post war Los Angeles where freeways were coming and the population would shift from cable cars and trolleys to the automobile. It was the dawn of what was to be an autopia and at the Zodiac Motel every bungalow came with its own parking space on the side, and an entrance just steps from the car door.

This is Mitzi Roberts.

Mitzi Roberts:

I just think it is so interesting, these concealed parking areas between the buildings. But it's also interesting too, as an investigator, I want to get in there, and I want to see. I want to see the bathtub. I want to see the layout, and I want more knowledge to again put those pieces together that are missing.

Michael Connelly:

We asked a resident of the complex if we could take a look inside his bungalow. He allowed us in but when we checked out the unit's bathroom, there was no tub. Only a phone booth sized shower.

But a careful inspection of the apartment's layout revealed what appeared to have been a renovation in which an area in the bathroom that was the size of a bathtub was at some point divided in two, creating the small shower in the bathroom and a space in the adjoining kitchenette for a full size refrigerator to be recessed into the newly created space.

This would fit with social and cultural history. The Zodiac Motel was built shortly after the end of the Second World War, opening its doors in mid-1946. It lasted five years as a motel and then became apartments. During the post war prosperity of the 1950s, full-size refrigerators became a household staple. That trend could have dictated a renovation that would remove the tub to create space for the bigger capacity cold storage.

Despite the cheery pastel colors of the bungalows of the former Zodiac Motel, there was something haunting about the place. It was sad to think about it possibly being the last stop in the short life of the Black Dahlia.

Mitzi Roberts:

It's a bit eerie of course, to think that, anytime you think that somebody lost their life at a location, is sort of hallowed ground.

Michael Connelly:

It certainly felt that way to me.

I'm Michael Connelly and you've been listening to Killer In The Code: Solving The Black Dahlia and Zodiac Cases. We'll be back with Chapter 6 soon when we try to decode perhaps the biggest cipher of them all: Marvin Margolis. We're going to track him across time and murder.

This episode was written and produced by Michael Connelly. It was edited by Terrill Lee Lankford with sound design and music by Mark Henry Phillips.

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Thank you for listening.