

ILLUSTRATED DNA CASE STUDIES

Analyzed by Truth Labs

Paternity Testing

1. Issues-

- Documentation
- Return of samples

2. Issues-

- Off ladder
- Blood group difference

AUTOSOMAL STR LOCI	Sample 1 (Alleged Father)	Sample 2 (Son)
	ALLELE DATA	
1. D3S1358	17,18	15, 17
2. vWA	15, 19	15, 15
3. D16S539	11, 11	11, 11
4. CSF1PO		
5. TPOX		
6. Y indel	2	1
7. Amelogenin	X, Y	X, Y
8. D8S1179		
9. D21S11		
10. D18S51		
11. DYS391	10	10
12. D2S441		
13. D19S433		
14. TH01		
15. FGA		
16. D22S1045		
17. D5S818		
18. D13S317		
19. D7S820		
20. SE33		
21. D10S1248		
22. D1S1656	OL, 14	OL, 14
23. D12S391		
24. D2S1328		

Pharmaceuticals

1. Limited sample, medicine inside

AUTOSOMAL STR LOCI	Sample X (stain on needle)
	ALLELE DATA
1. D3S1358	--, --
2. vWA	15, 17
3. D16S539	11, 12
4. CSF1PO	10, 11
5. TPOX	8, 8
6. Y indel	N.A.
7. Amelogenin	X, X
8. D8S1179	--, --
9. D21S11	28, 29
10. D18S51	14, 21
11. DYS391	N.A.
12. D2S441	14, 14
13. D19S433	--, --
14. TH01	9, 9
15. FGA	22, 26
16. D22S1045	--, --
17. D5S818	10, 11
18. D13S317	12, 15
19. D7S820	10, 11
20. SE33	19, 28
21. D10S1248	--, --
22. D1S1656	OL, 13

Motor Accidents

Issues- presence of dirt, mixed/ partial profiles

AUTOSOMAL STR LOCI	Sample Z (Swab)
	ALLELE DATA
1. D3S1358	--, --
2. vWA	15, 17, 17
3. D16S539	11, 12
4. CSF1PO	10, 11
5. TPOX	8, 8, 9
6. Y indel	N.A.
7. Amelogenin	X, X
8. D8S1179	--, --
9. D21S11	28, 29
10. D18S51	14 21
11. DYS391	N.A.
12. D2S441	14, 14
13. D19S433	--, --
14. TH01	9, 9
15. FGA	22, 26, 30
16. D22S1045	--, --
17. D5S818	10, 11
18. D13S317	12, 15
19. D7S820	10, 11
20. SE33	19, 28
21. D10S1248	--, --
22. D1S1656	OL, 13, 17

Police/ courts

- 2 police stations
- 10/21 mismatch

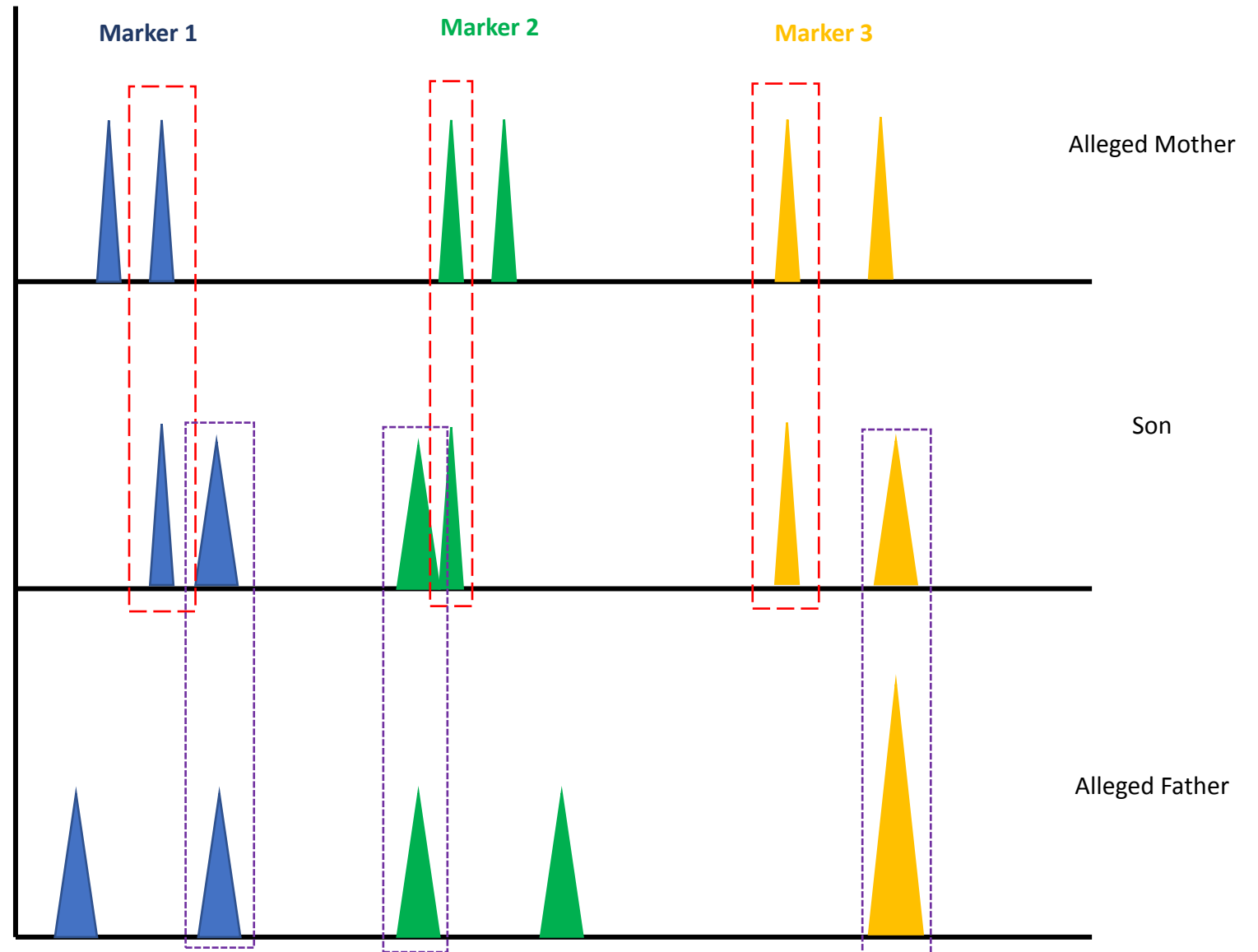
AUTOSOMAL STR LOCI	Sample 1 (Bone fragments)	Sample 2 (Alleged Son)
	ALLELE DATA	
1. D3S1358	17,19	15, 15
2. vWA	15, 15	17, 18
3. D16S539	9,13	11, 12
4. CSF1PO	12,13	13,14
5. TPOX	8,9	9,9
6. Y indel	NA	1
7. Amelogenin	X, X	X, Y
8. D8S1179		
9. D21S11		
10. D18S51		
11. DYS391	NA	10
12. D2S441		
13. D19S433		
14. TH01		
15. FGA		
16. D22S1045		
17. D5S818		
18. D13S317		
19. D7S820		
20. SE33		
21. D10S1248		
22. D1S1656		
23. D12S391		

“Validating Your Existence”

- A young adult was instigated by his relatives into believing that he was swapped at birth and was not born to his parents.
- He was approached by an old couple, claiming he was their son.
- Depressed at the thought of not being associated with his parents, the young adult sought scientific validation of his association with the people who had raised him.



- The young adult and the parents who raised him approached Truth Labs for DNA Profiling.
- Matching alleles were seen against both the parents.
- DNA Profiling showed unambiguously that he was the biological child of the people who raised him.



“Violence in the Billiards Room” or “Bloody Brawl on the Billiards Table”

- In September 2019, an elite sports club in Chennai was the scene of a brawl.
- Two senior stewards were suspected to be involved in the brawl.
- The brawl went beyond simple kicks and punches. The participants had used a cue stick as well during the brawl.
- The use of the cue stick for assaulting resulted in blood being spilled, which stained the green felt of the adjoining billiards table.



Marker Names	STR Profile generated from the suspected stain on the green felt of the billiards table
Marker 1	8, 11
Marker 2	7, 9
Marker 3	24, 30.2
Marker 4	14, 14
Marker 5	16, 18
Marker 6	22, 22

- The stewards tried to clean the blood from the billiards table using bleach.
- They didn't want to be reported and fired for conduct unbecoming.
- The Secretary of the Sports club came to know about the brawl despite the attempts at cover-up.
- He sent the billiards table green felt for DNA Profiling.
- Truth Labs was successful in obtaining a DNA profile from the suspected blood stains which can be used anytime for comparing to a list of suspects.

“For the Sake of Honour”

- The ‘Thevars’ of Ramanathapuram district of TN were very particular about their self-respect and would go to any extent to fight for it.
- The Petitioner, Mrs. Saraswathi, aged 70 years, was socially boycotted by her sister-in-law after her elder brother’s demise.
- To claim a biological relationship with her late elder brother and his children, Mrs. Saraswathi had to file a civil suit.
- After a prolonged civil suit for 10 years, the court directed Truth Labs to perform kinship tests, as the local Forensic Science Laboratory expressed their inability to do so.

“Grand Old Man from the Sea” or “Recovered from a Watery Grave”

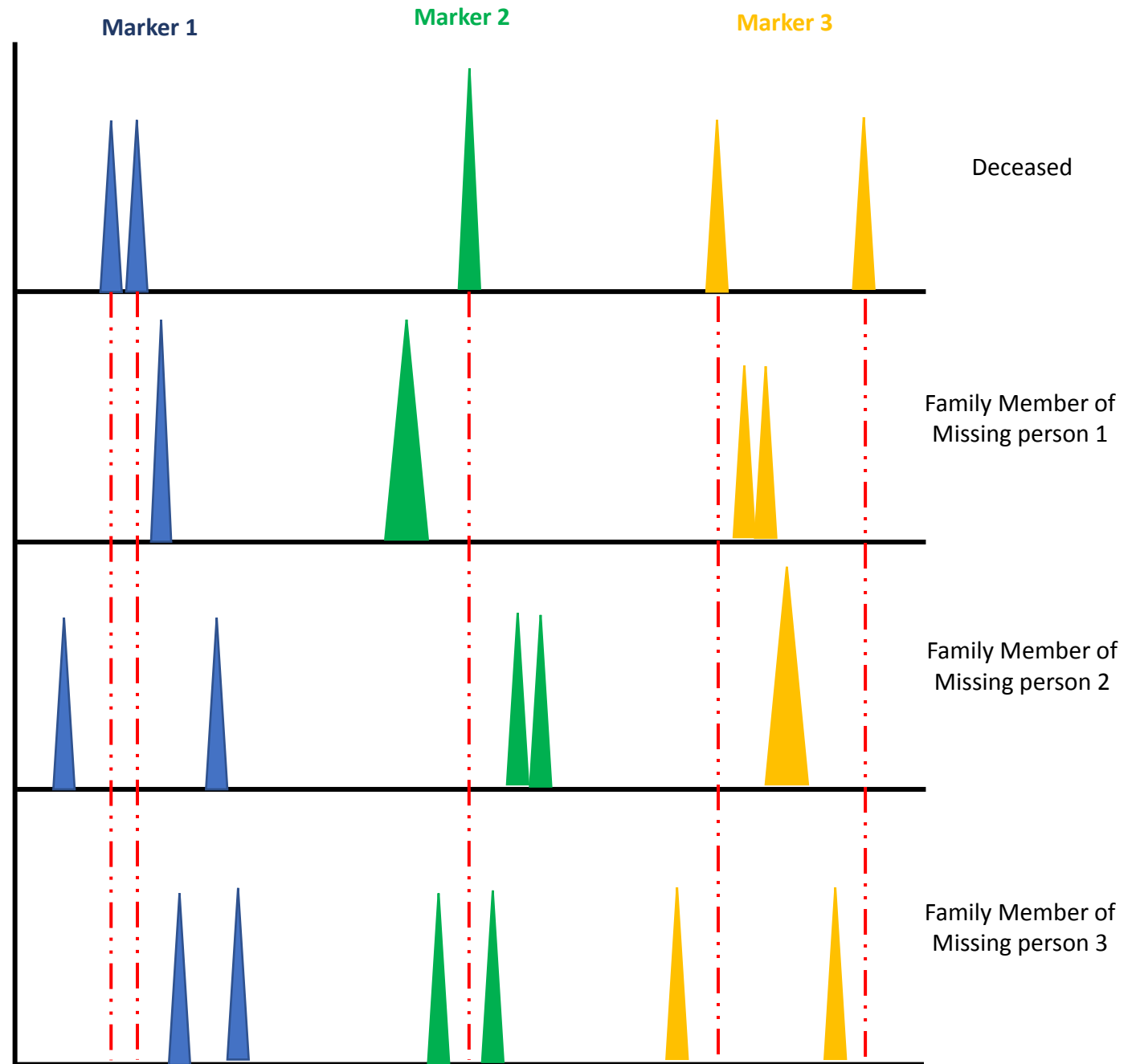


- An unidentified decomposed dead body was recovered from the sea by the Andaman Police.
- Facial recognition was impossible due to the highly decomposed nature of the human remains.
- The postmortem revealed that the body was of an adult male, aged about 25-40 years old, and the time of death was around 3-4 months.

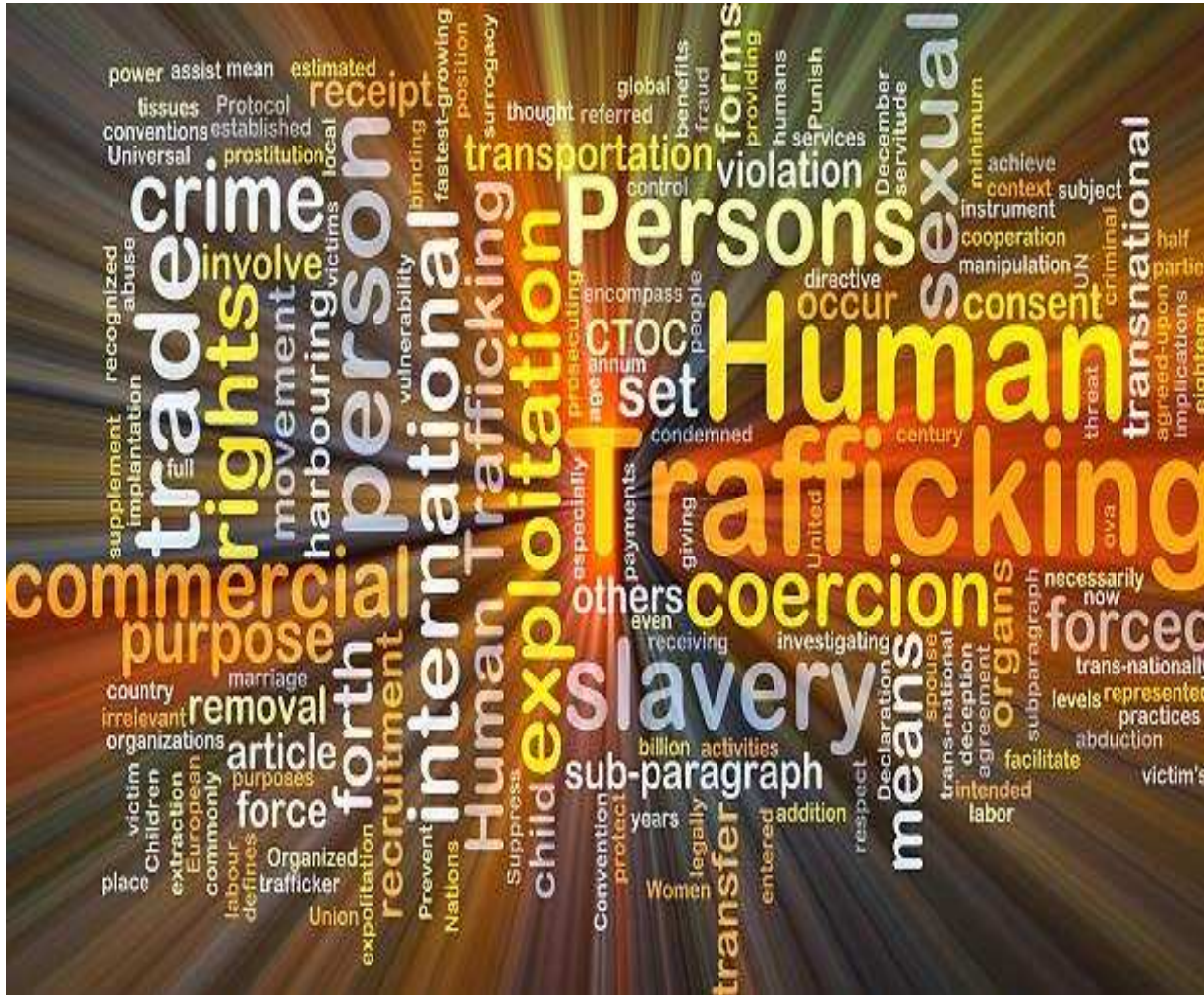
- They preserved bone and tissue samples from the deceased for future testing and reference.
- A case was registered by the Andaman Police and a press release was given informing the public about the basic information about the deceased.
- On vetting the missing person's register, the police identified 3 possible missing males who matched the physical description of the deceased.



- In order to identify the deceased, blood samples of the family members of the 3 missing men were sent to Truth Labs, along with the bone from the deceased for DNA profiling.
- DNA Profiling of the deceased did not match with the DNA profiles of any of the family members of the missing men.



“Illegal Sex Slaves”



- Human trafficking is an organized crime.
- Maintained and run by gangs or individuals.
- It involves the sale and buying of humans for either bonded labour or sexual exploitation.
- It is depraved and inhumane activity wherein young girls, boys, women are moved within a country as well as over borders for monetary benefits.

- A complaint was lodged with the Kolkata Police against a couple for running an illegal prostitution business and engaging in trafficking of four young girls.
- The four young girls were aged 3, 4, 14 & 19, who all appeared physically diverse.
- The couple claimed these girls are their own daughters. They further claimed that their son looked after them for the sake of convenience.
- The Police did not believe the claims of the couple and their son.



Girl – 3yrs



Girl – 4yrs



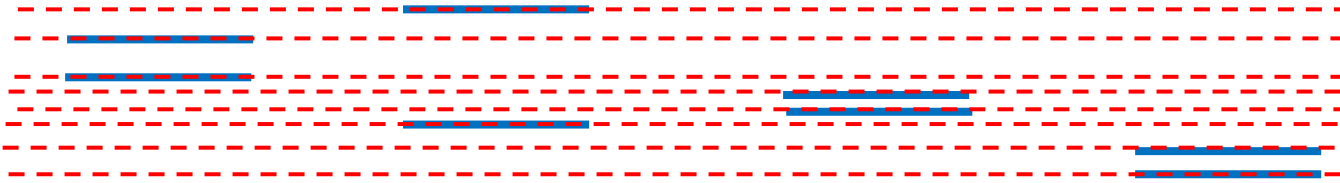
Girl – 14yrs



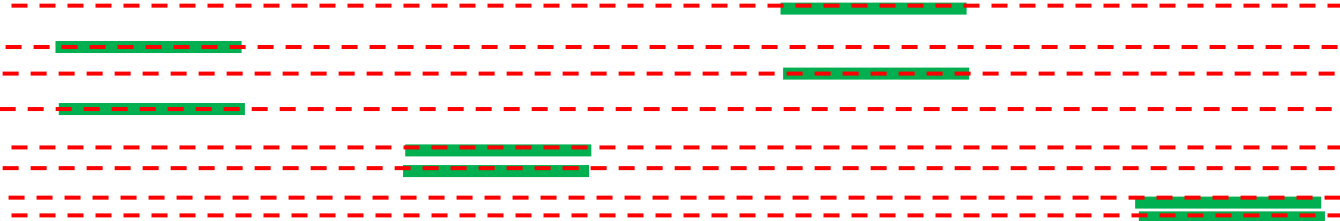
Girl – 19yrs



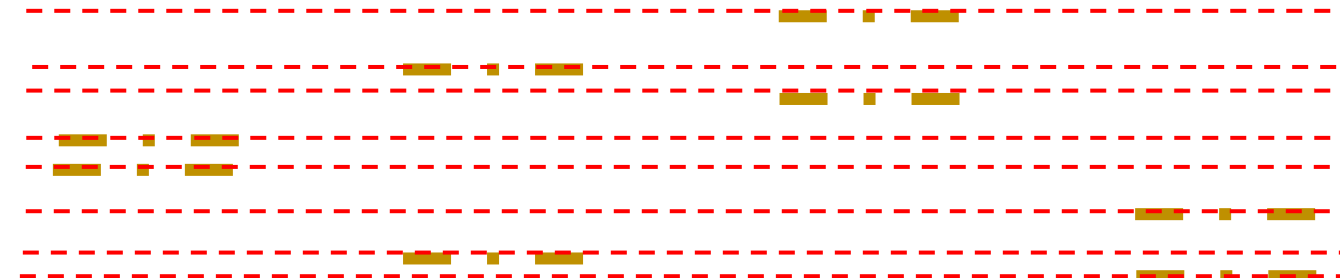
Marker 1



Marker 2



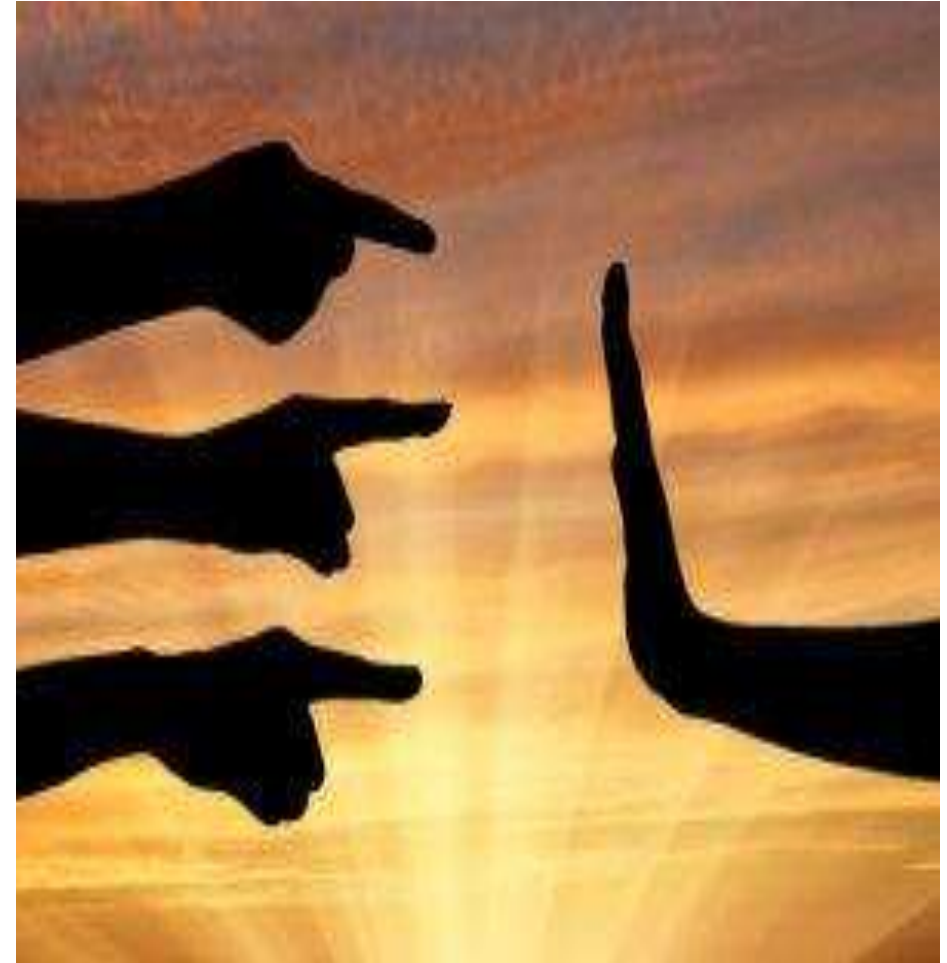
Marker 3

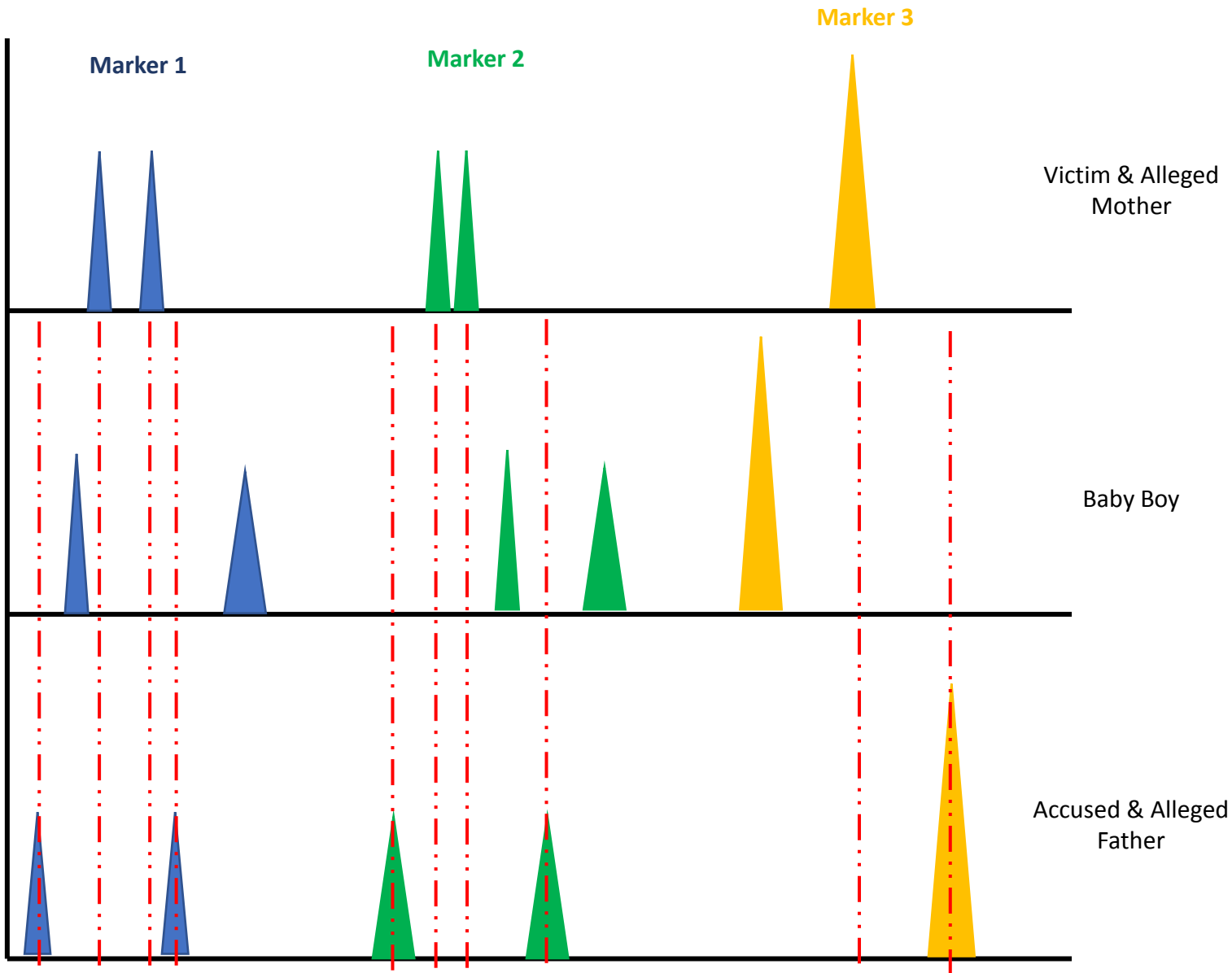


- Kolkata Police approached Truth Labs for DNA profiling of the 4 young girls.
- They wanted to establish if the couple and their son were biologically related to the 4 young girls.
- DNA Profiling revealed that none of the 4 girls were related to each other, nor were they related to the couple and their son.
- Based on the DNA report, the police arrested the couple and their son for human trafficking and also captured their entire network/gang.

“False Allegation”

- A 16-year-old girl had fallen in love with a close family associate (35 years old).
- They had a sexual relationship, after which she was pregnant and bore a baby boy.
- The young girl and her family lodged a complaint with the West Bengal Police saying she was sexually assaulted and forced into the relationship by the older man.
- The investigating officer thought that the truth would be evident after DNA Profiling.





- Mismatching of alleles was seen against both parents.
- *DNA Profiling revealed that neither the complainant nor the accused were the biological parents of the baby boy.*
- *The accused was released based on the basis of investigation and DNA evidence.*

“Two Toasted Bodies”



- This case was from Durgachak P.S., Medinipur, WB.
- Passers-by noticed two corpses along a brick wall in Haldia and reported the same to the Police.
- The police arrived in time to stop the complete burning of the bodies.
- Identification of the victims via facial recognition was impossible due to disfiguration and charring of the bodies.

- The Autopsy surgeon preserved bones and partially burnt tissue from the victims.
- Based on the autopsy, the Surgeon estimated that the victims were women, aged 18-20 years old and 30-35 years old.
- The physical description was circulated amongst the public and a man came forward saying that the victims might be his sister and niece.



- The Police sent the partially burnt bones and tissues of the victims along with the alleged family member's blood for DNA profiling.
- The partially burnt bones and tissues of the victims were poorly preserved and covered with larvae, maggots and green-bottleflies.
- After segregating and discarding the larvae, maggots and green-bottleflies, the bone and tissue samples along with the alleged family member's blood were taken up for DNA analysis.



- DNA profiling proved that the two victims were indeed women and that they were parent-offspring (mother-daughter).
- DNA profiling also established clearly that the victims were the individual's sister and niece.

Marker Names	Victim 1 (18–20-year-old)	Victim 2 (30–35-year-old)	Alleged Brother & Uncle
Marker 1	10, 10	10, 12	10, 12
Marker 2	8, 13	8, 8	8, 11
Marker 3	26, 30	15.3, 26	21, 26
Marker 4	15, 16	16, 16	16, 17
Marker 5	8, 9	9, 9.3	9, 9.3
Marker 6	29, 30.2	28, 30.2	28, 30.2
Sex Marker	X, X	X, X	X, Y

“Out of Control Teenager”



- This case was sent by the Juvenile Justice Board, Ananda Math, Purulia.
- A 7-year-old girl was discovered by her father, crying one afternoon.
- Upon asking, she said that she had pain in her private regions and that the neighbouring teenage boy (15) touched her over there.

- The doctors did an examination of the young girl and discovered that she was sexually assaulted. They collected her clothing and swabs from the private areas and gave the same to the police.
- Her father filed a complaint against the neighbouring teenage boy with the police.
- The police arrested the boy and confiscated his clothing for examination.





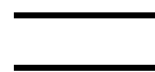
Victim's
Reference

Victim's
clothing



Victim's
Reference

Accused's
clothing



- The police sent the clothing worn by both the victim and the accused for DNA profiling along with reference samples.
- DNA Profiling discovered the victim's blood and body fluids on the accused's clothing.
- The teenager had hurt and sexually assaulted the small girl.

Thank You