

The Mystery of Anastasia

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What happened to Anastasia Romanov??

Anastasia Romanov was the youngest daughter of Tsar Nicholas II of Russia and his wife Tsarina Alexandra. She had three older sisters, Olga, Maria and Tatiana, and a younger brother, Alexei. In 1917, the Romanovs were overthrown by the Bolsheviks and their leader, Vladimir Lenin. Anastasia and her family were imprisoned in Siberia and in July of 1918, they were brutally murdered. In order to prevent those who remained loyal to the Tsar from finding his remains, the bodies were buried in a secret location.

Could Anastasia have survived the massacre that took the lives of her entire family? Did she escape and live out her life, never being recognized for who she truly was? Analyze the evidence and decide for yourself...

Anna Anderson

Is she the missing princess?



In February of 1920, a young woman was rescued from the Landwehr canal in Berlin, Germany. After two years as “Miss Unknown,” the young woman revealed her identity as Anastasia Romanov. She later assumed the name of Anna Anderson. Could Anna Anderson actually be the missing princess?

The Evidence

Do Anna Anderson and Anastasia look alike?
List some of their physical similarities?

Handwriting Analysis



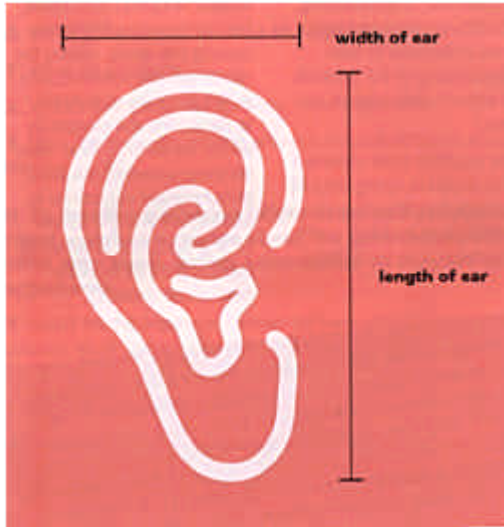
Above, there are two handwriting samples. The shaded samples are excerpts from letters written by Anastasia; the white samples are those of Anna Anderson.

What is similar about these samples? What is different? _____

On your computer, click on a letter written by Anastasia to see it compared with one written by Anna Anderson.

Could they have been written by the same person? _____

The Ear Test



No two people have exactly the same ears, not even identical twins! Ear shape and size can be used to help determine an individual's identity.

Examine the photographs of Anastasia's ears and compare them to Anna Anderson's. Use the scale to the left to help in your analysis.

Do their ears match? _____

In your opinion, could they be the same person? _____

Is this enough evidence to prove that Anna Anderson is Anastasia? _____

Propose a way to determine her identity: _____

Face Comparison

Compare the photographs of these five different people with one of the true Anastasia by rolling over the unknown faces.

Use the chart below to determine which of them could be Anastasia.

Faces	Does this face resemble Anastasia?		Who are they?
	Yes	No	
Face #1	Yes	No	
Face #2	Yes	No	
Face #3	Yes	No	
Face #4	Yes	No	
Face #5	Yes	No	

Which face most closely resemble Anastasia's?

Can an individual's identity be determined by physical likeness alone? Why or why not?

The Bones



Many long held secrets were finally revealed when the Soviet Empire collapsed in 1989. Among them was the secret burial location of Tsar Nicholas and his family. In 1992, a group of scientists uncovered their remains and made some startling discoveries.

Killed along with the royal family were 2 male servants, the family doctor and a nurse. Eleven people were murdered that night in Siberia: 6 females and 5 males. The following chart lists who they were and the ages of the children.

Females

Tsarina Alexandra, adult
Princess Olga, 22 years old
Princess Tatiana, 21 years old
Princess Maria, 19 years old
Princess Anastasia, 17 years old
Nurse, adult

Males

Tsar Nicholas, adult
Prince Alexei, almost 14 years old
Family doctor, adult
Servant, adult
Servant, adult

How many skeletons do we expect to find? _____

**Click on any bone in the grave to remove a skeleton.
Continue until no bones remain in the grave.**

How many skeletons were found in the grave? _____

Analyze the bones

Click on skeleton #1. Analyze the bones by rolling over the boxes. Use the key to the right of the screen to determine if the wisdom teeth are present, if rings on the vertebrae are present and if the pelvis is that of a male or of a female. Do the same for the other 8 skeletons.

Use this information and the list of who was murdered to determine whose skeletons are present and whose might be missing.

	Skeleton #1	Skeleton #2	Skeleton #3	Skeleton #4	Skeleton #5	Skeleton #6	Skeleton #7	Skeleton #8	Skeleton #9
Wisdom Teeth Present? (Yes = 22 years and older)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	No	No	No	No	No	No	No	No	No
Rings on the vertebrae? (Yes = 18 years and older)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	No	No	No	No	No	No	No	No	No
Pelvis: Male or Female?	Male	Male	Male	Male	Male	Male	Male	Male	Male
	Female	Female	Female	Female	Female	Female	Female	Female	Female
Give a possible identity for each skeleton.									

Who is missing? _____

The DNA

Although the historical evidence tells us that these are the remains of the murdered royal family, how can we prove their identity? _____

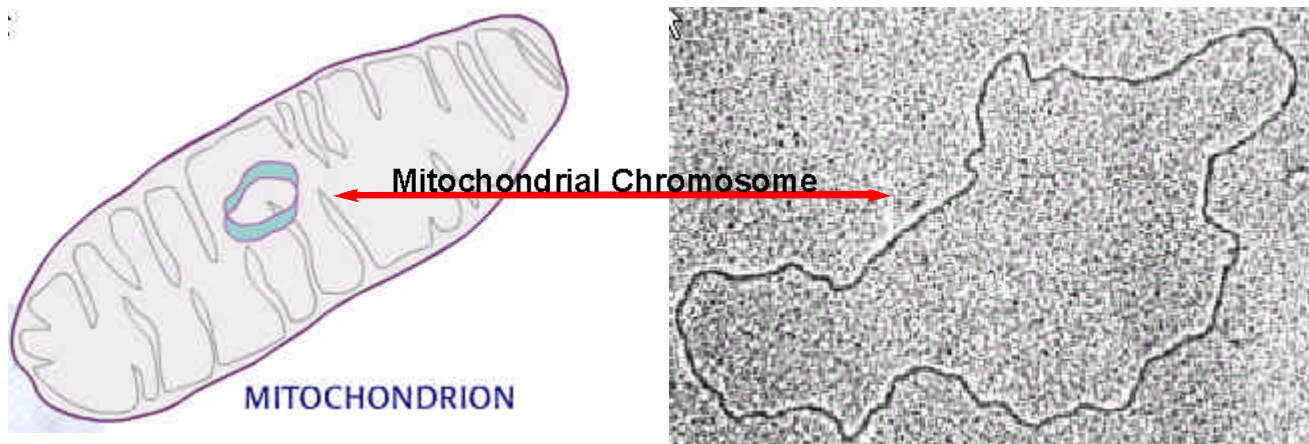
Because there are no direct descendants and the only surviving relatives are distant, the best way to determine their identity is to use DNA from the mitochondria.

What are mitochondria? _____

Mitochondria contain a small circular chromosome. Only the mother passes on her mitochondrial DNA and it remains relatively unchanged for many generations.

Do you have mitochondrial DNA? _____

If so, who gave it to you? _____



From whom did the royal children inherit their mitochondrial DNA?

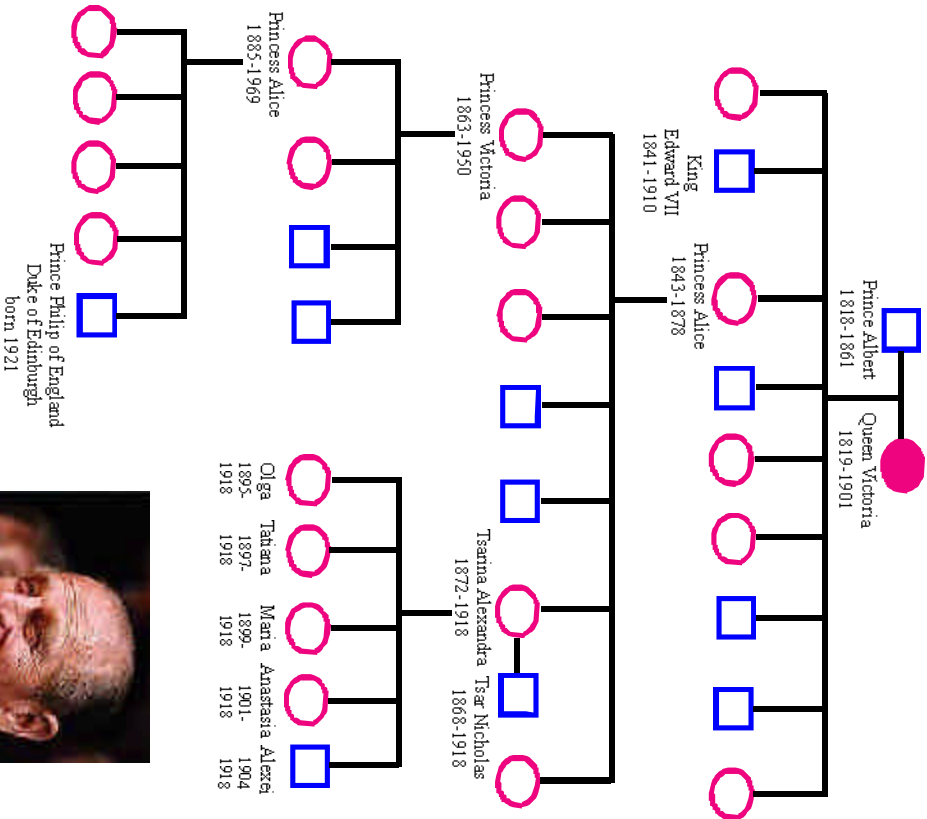
From whom did that person inherit her mitochondrial DNA?

Does Tsar Nicholas have the same mitochondrial DNA as his children?

Recovering the Romanovs:

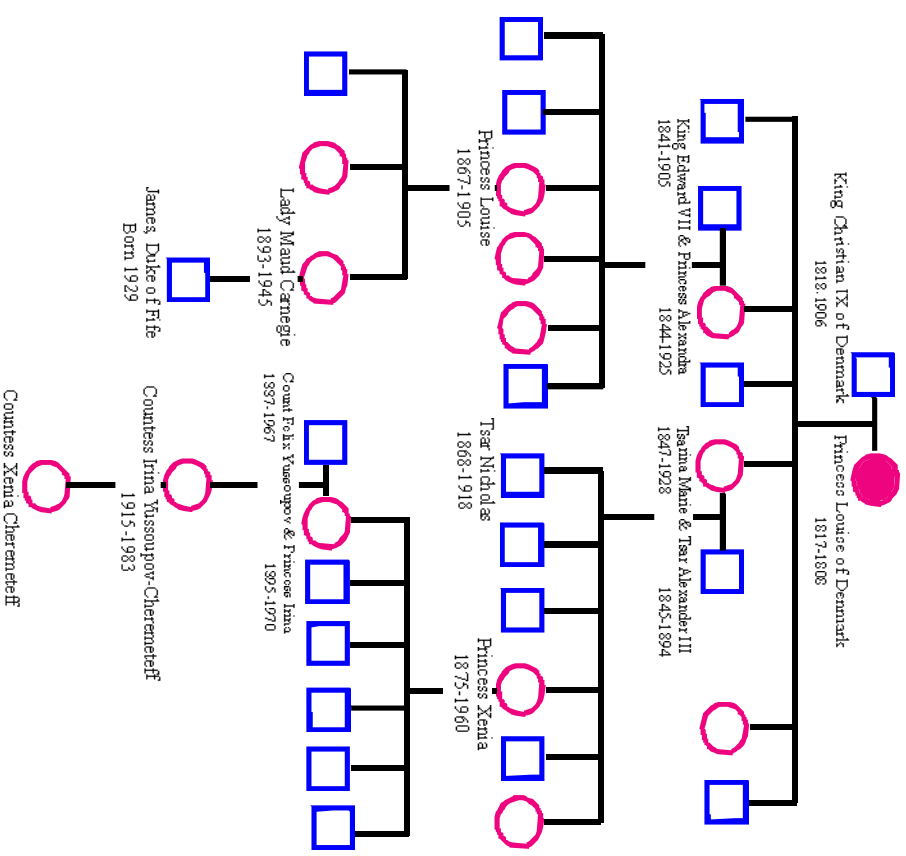
Shade in each person with the same mitochondrial DNA as Queen Victoria.

The Tsarina's Family Tree



Shade in each person with the same mitochondrial DNA as Princess Louise.

The Tsar's Family Tree



- = Males
- = Females

Analyzing the DNA

By examining the Tsarina's family tree, which living relative has mitochondrial DNA that matches the Tsarina and her children? _____

By examining the Tsar's family tree, whose mitochondrial DNA can we test the Tsar's against? _____

Samples were taken from each of the 9 skeletons as well as living relatives of the Tsar and Tsarina. Mitochondrial DNA was extracted and then sequenced.

What does it mean to "sequence" DNA? _____

How many females are in the grave? _____

Click the Bioservers link to view the mtDNA sequences of the female skeletons.

The sequences will be aligned and differences will be highlighted in yellow.

Which female sequence does not match the others? _____

Who could this person be? _____

What do we now know about the remaining 4 females?

Now we must determine which male is the Tsar. We were able to obtain mitochondrial DNA sequences for two of the Tsar's maternal relatives.

Click the Bioservers link to view the mtDNA sequences of the male skeletons.

The sequences will be aligned and differences will be highlighted in yellow.

Which skeleton is that of Tsar Nicholas? _____

How do you know? _____

Who is Anna Anderson?

If Anna Anderson is really the missing princess Anastasia, whose mitochondrial DNA sequence should match hers? _____

How can we determine if Anna Anderson is Anastasia Romanov?

Carl Maucher is a maternal great-nephew of Franziska Schanzkofska. How can we determine if Anna Anderson is Franziska? _____

Click the mtDNA sequence button for an alignment of Anna Anderson's DNA with both Carl Maucher and Prince Philip's DNA. Differences will be highlighted in yellow.

Is Anna Anderson really Anastasia?

