



YOUR MATERNAL LINE



WHO AM I?

Robert Sheldon Ward

I'm a member of the "haplogroup R1b" group, also known as "M343".

They say that 70% of the men in Southern England belong to this group, and that parts of Spain and Ireland it's 90% of the men.



YOUR PATERNAL LINE

R1b-M343

The common direct paternal ancestor of all men alive today was born in Africa around 140,000 years ago. He was neither the first human male nor the only male alive in his time. He was the only male whose direct lineage is present in current generations. Most men, including your direct paternal ancestors, trace their ancestry to one of this man's descendants.

Your branch of this lineage took part in out-of-Africa migrations. Your ancestors traveled to the grassy steppes between Central and South Asia. There your ancestor's journey marked a major turning point. His descendants include two major branches that today account for most European men and many others from Central Asia, West Asia, and South Asia.

WHY IS THIS NOT AVAILABLE TO ME?

As a first-phase participant of the Genographic Project, analysis of only one side of your story is available. With Geno 2.0, you can receive both maternal and paternal information. [Click here](#) to purchase Geno 2.0.



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YOUR JOURNEY BEGINS HERE...



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INTRODUCTION TO YOUR STORY

We will now take you back through the stories of your distant ancestors and show how the movements of their descendants gave rise to your lineage.

Each segment on the map above represents the migratory path of successive groups that eventually coalesced to form your branch of the tree. We start with the marker for your oldest ancestor, and walk forward to more recent times, showing at each step the line of your ancestors who lived up to that point.

What is a marker? Each of us carries DNA that is a combination of genes passed from both our mother and father, giving us traits that range from eye color and height to athleticism and disease susceptibility. As part of this process, the Y-chromosome is passed directly from father to son, unchanged, from generation to generation down a purely male line. Mitochondrial DNA, on the other hand, is passed from mothers to their children, but only their daughters pass it on to the next generation. It traces a purely maternal line.

The DNA is passed on unchanged, unless a mutation—a random, naturally occurring, usually harmless change—occurs. The mutation, known as a marker, acts as a beacon; it can be mapped through generations because it will be passed down for thousands of years.

When geneticists identify such a marker, they try to figure out when it first occurred, and in which geographic region of the world. Each marker is essentially the beginning of a new lineage on the family tree of the human race. Tracking the lineages provides a picture of how small tribes of modern humans in Africa tens of thousands of years ago diversified and spread to populate the world.

By looking at the markers you carry, we can trace your lineage, ancestor by ancestor, to reveal the path they traveled as they moved out of Africa. Our story begins with your earliest ancestor. Who were they, where did they live, and what is their story? Click "Next" to begin.



Photograph by Pete Fernandez, My Shot

BRANCH: M42

AGE: ABOUT 75,000 YEARS AGO

LOCATION OF ORIGIN: AFRICA

The common direct paternal ancestor of all men alive today was born in Africa around 140,000 years ago. Dubbed “Y-chromosome Adam” by the popular press, he was neither the first human male nor the only man alive in his time. He was, though, the only male whose Y-chromosome lineage is still around today. All men, including your direct paternal ancestors, trace their ancestry to one of this man’s descendants. The oldest Y-chromosome lineages in existence, belonging to the A branch of the tree, are found only in African populations.

Around 75,000 years ago, the BT branch of the Y-chromosome tree was born, defined by many genetic markers, including M42. The common ancestor of most men living today, some of this man’s descendants would begin the journey out of Africa, to India and the Middle East. Small groups would eventually reach the Americas. Others would settle in Europe, and some from this line remained near their ancestral homeland in Africa.

Individuals from this line in Africa often practice cultural traditions that resemble those of their distant ancestors. For example, they often live in traditional hunter-gatherer societies. These include the Mbuti and Biaka Pygmies of central Africa, as well as Tanzania’s Hadza.

As M42-bearing populations migrated around the globe, they picked up additional markers on their Y-chromosomes. Today, there are no known BT individuals without these additional markers.

POINT OF INTEREST

The M42 branch is shared by almost all men alive today, both in Africa and around the world.

PHOTOS FROM THIS REGION

People on this branch carry one of Africa’s—and the world’s—oldest paternal lineages. Many of its members still live near its South African point of origin.

Photograph by Derwet Chan, My Shot





Photograph by Ali Tahan, My Shot

BRANCH: M168

AGE: ABOUT 70,000 YEARS AGO

LOCATION OF ORIGIN: AFRICA/ASIA

As humans left Africa, they migrated across the globe in a web of paths that spread out like the branches of a tree, each limb of migration identifiable by a marker in our DNA. For male lineages, the M168 branch was one of the first to leave the African homeland.

Moving outward from Africa and along the coastline, members of this lineage were some of the earliest settlers in Asia, Southeast Asia, and Australia. Some from this line would even travel over the land bridge to reach the Americas.

The man who gave rise to the first genetic marker in your lineage probably lived in northeast Africa in the region of the Rift Valley, perhaps in present-day Ethiopia, Kenya, or Tanzania. Scientists put the most likely date for when he lived at around 70,000 years ago. His descendants became the only lineage to survive outside of Africa, making him the common ancestor of every non-African man living today.

But why would man have first ventured out of the familiar African hunting grounds and into unexplored lands? The first migrants likely ventured across the Bab-al Mandeb strait, a narrow body of water at the southern end of the Red Sea, crossing into the Arabian Peninsula soon after M168 originated—perhaps 65,000 years ago. These beachcombers would make their way rapidly to India and Southeast Asia, following the coastline in a gradual march eastward. By 50,000 years ago, they had reached Australia. These were the ancestors of today's Australian Aborigines.

It is also likely that a fluctuation in climate may have contributed to your ancestors' exodus out of Africa. The African ice age was characterized by drought rather than by cold. Around 50,000 years ago, though, the ice sheets of the northern hemisphere began to melt, introducing a short period of warmer temperatures and moister climate in Africa and the Middle East. Parts of the inhospitable Sahara briefly became habitable. As the drought-ridden desert changed to a savanna, the animals hunted by your ancestors expanded their range and began moving through the newly emerging green corridor of grasslands.

Your nomadic ancestors followed the good weather and the animals they hunted, although the exact route they followed remains to be determined. In addition to a favorable change in climate, around this same time there was a great leap forward in modern humans' intellectual capacity. Many scientists believe that the emergence of language gave us a huge advantage over other early human species. Improved tools and weapons, the ability to plan ahead and cooperate with one another, and an increased capacity to exploit resources in ways we hadn't been able to earlier, all allowed modern humans to rapidly migrate to new territories, exploit new resources, and replace other hominids such as the Neanderthals.

POINT OF INTEREST

This male branch is one of the first to leave the African homeland.

PHOTOS FROM THIS REGION

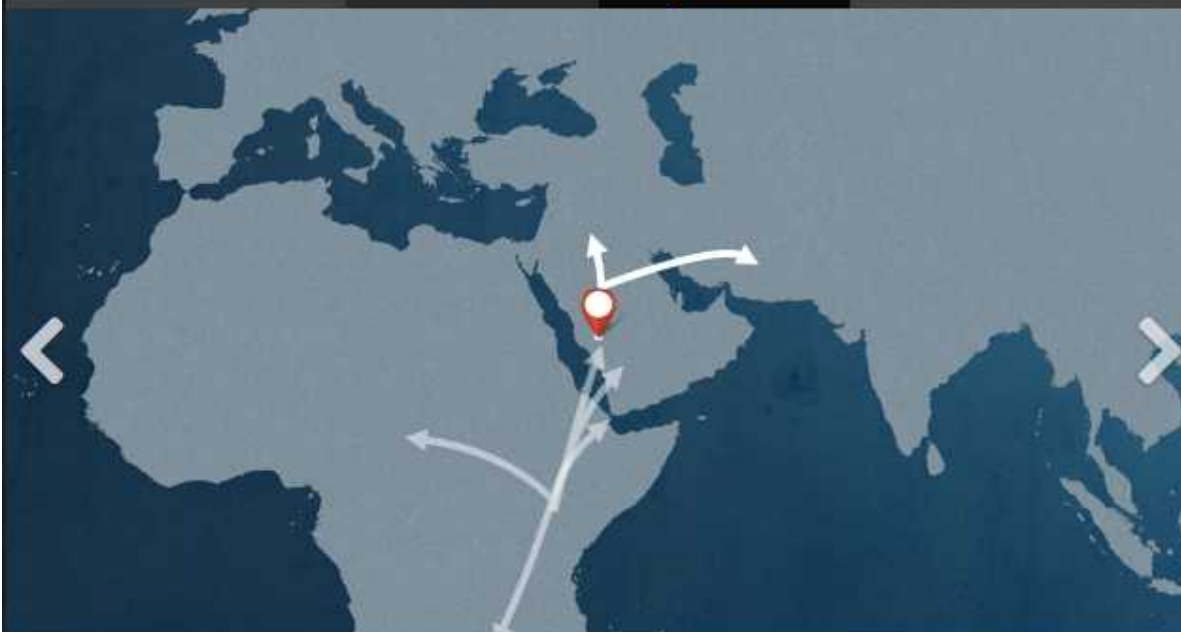
The Serengeti Plain's Maasai people, seen here in dance, still measure wealth and prestige by the cattle and other herds at the foundation of their pastoral society.

Photograph by Blake Ezra Cole, My Shot





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*Photograph by Claren Clancy, My Shot*

BRANCH: M89

AGE: AROUND 50,000 YEARS AGO**LOCATION OF ORIGIN: SOUTH ASIA OR WEST ASIA**

The next male ancestor in your ancestral lineage is the man who gave rise to M89, a marker found in 90 to 95 percent of all non-Africans. This man was born around 50,000 years ago in northern Africa or the Middle East.

The first people to leave Africa likely followed a coastal route that eventually ended in Australia. Your ancestors followed the expanding grasslands and plentiful game to the Middle East and beyond, and were part of the second great wave of migration out of Africa.

Beginning about 40,000 years ago, the climate shifted once again and became colder and more arid. Drought hit Africa and the grasslands reverted to desert, and for the next 20,000 years, the Saharan Gateway was effectively closed. With the desert impassable, your ancestors had two options: remain in the Middle East, or move on. Retreat back to the home continent was not an option.

While many of the descendants of M89 remained in the Middle East, others continued to follow the great herds of wild game through what is now modern-day Iran to the vast steppes of Central Asia.

These semi-arid grass-covered plains formed an ancient "superhighway" stretching from eastern France to Korea. Your ancestors, having migrated north out of Africa into the Middle East, then traveled both east and west along this Central Asian superhighway. A smaller group continued moving north from the Middle East to Anatolia and the Balkans, trading familiar grasslands for forests and high country.

Today, geneticists have found the lineage in 1 to 2 percent of Pakistani and Indian populations. However, it is about 4 percent of some Austro-Asiatic-language-family-speaking groups in India. It is about 9 percent of some Dravidian-language-family-speaking groups in India, and it is 9 to 10 percent of male lineages in Sri Lanka. In Borneo, it is about 5 percent of the population. In Malaysia, it is about 8 percent of the population.

PHOTOS FROM THIS REGION

Indian children celebrate Holi, a Hindu celebration. Colored powders and liquids mimic flames—and herald the coming of spring.

Photograph by Jim Kasom, My Shot



R1b-M343



Photograph by Georgii Chechin, My Shot

BRANCH: P128

AGE: ABOUT 45,000 YEARS AGO

LOCATION OF ORIGIN: SOUTH ASIA

The next male ancestor in your ancestral lineage is the man who gave rise to P128, a marker found in more than half of all non-Africans alive today. This man was born around 45,000 years ago in the Middle East or Central Asia.

The descendants of P128 migrated to the east and north, picking up additional markers on their Y-chromosomes. This lineage is the parent of several major branches on the Y-chromosome tree: O, the most common lineage in East Asia; R, the major European Y-chromosome lineage; and Q, the major Y-chromosome lineage in the Americas. These descendant branches went on to settle the rest of Asia, the Americas, and Europe; many others traveled to Southeast Asia.

Today, P128 individuals lacking these additional markers are rare in most populations, and are most commonly seen in Oceanian and Australian Aboriginal populations.

PHOTOS FROM THIS REGION

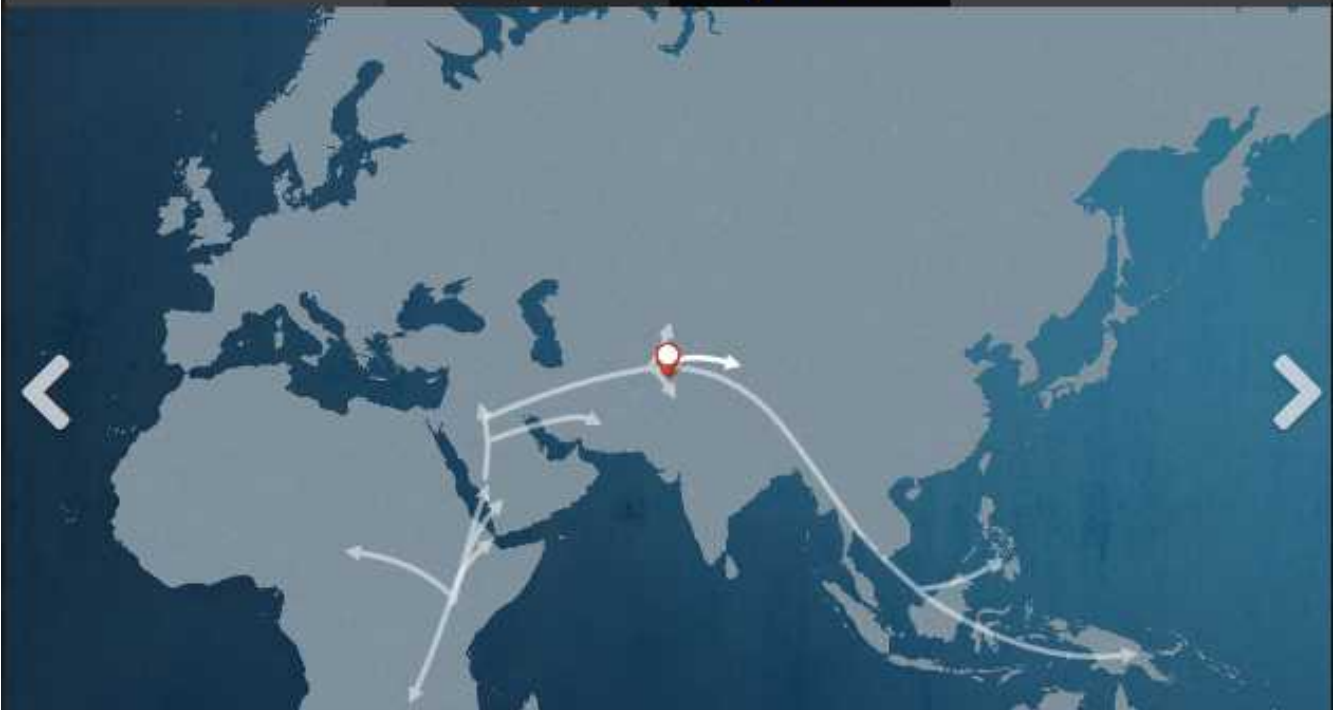
This Miao village is in Guizhou, China. In China the term "Miao" denotes four ethnic groups not closely related to one another: the Hmu, Qo Xiong, A-Hmao, and Hmong peoples.

Photograph by Kho Chee Hui, My Shot





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*Photograph by Andrew McCutcheon, Alamy*

BRANCH: M45

AGE: AROUND 35,000 YEARS AGO**LOCATION OF ORIGIN: CENTRAL ASIA OR SOUTH ASIA**

This paternal ancestor traveled with groups in the open savannas between Central and South Asia during the Paleolithic. These big game hunters were the parents to two of the most widespread male lineages in modern populations, one that is responsible for the majority of pre-Columbian lineages in the Americas (haplogroup Q) and many others from Asia and Europe. Another one that spread farther into Asia produced the highest frequency lineages in European populations (haplogroup R).

Today, members of this lineage who do not belong to a descendant branch are rare, and geneticists have found them most often in India. These populations include such diverse groups as the Saora (23 percent), the Bhumij (13 percent), and Muslims from Manipur (33 percent).

POINT OF INTEREST

Known as the Central Asian Clan, this branch gave rise to many distinct lineages that spent the next 30,000 years gradually populating much of the planet.

PHOTOS FROM THIS REGION

Indian women fish with traditional nets. Today India has the highest population of the M45 lineage, whose later offshoots are found in most Native Americans and Europeans.

Photograph by Deleesh Ghosh, Your Shot



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Photograph by Inayat Shah, My Shor

BRANCH: M207

AGE: ABOUT 30,000 YEARS AGO

LOCATION OF ORIGIN: CENTRAL ASIA

M207 was born in Central Asia around 30,000 years ago. His descendants would go on to settle in Europe, South Asia and the Middle East over the following 20,000 years. Today, most western European men belong to one branch—R-M342—that descended from this lineage. While it appears to have been one of the earliest lineages to settle in Europe more than 25,000 years ago, more recent population expansions associated with the post-glacial repopulation of northern Europe after the end of the last ice age, as well as the spread of agriculture during the Neolithic, also contributed to its high frequency in Ireland, the UK, France and Spain.

One descendant lineage—R-L62—is common in Eastern Europe and India, and was likely spread in part through the migration of Indo-European steppe nomads over the past 5,000 years.

PHOTOS FROM THIS REGION

A herder poses with his horse in Kazakhstan's Tien Shan Mountains. Mountains like the Tien Shan formed impassable barriers that helped shape genetic patterns in Asia.

Photograph by John Webber-Lee, Getty Images





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Photograph by Tomek Matlak, My Shot

BRANCH: P231

AGE: 25,000 – 30,000 YEARS AGO

LOCATION OF ORIGIN: CENTRAL ASIA

The Paleolithic ancestor who founded this lineage lived a nomadic lifestyle. His descendants include two major descendant branches that today account for most European men and many others from Central Asia, West Asia, and South Asia.

PHOTOS FROM THIS REGION

A mother and daughter share a moment on a Belarus bench. Belarusians are Slavic peoples closely related to Russians, Poles, and Ukrainians.

Photograph by Mitchell Kanaskiewicz, Getty Images





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*Photograph by Nauman Arshad, My Shot*

BRANCH: M343

AGE: 17,000 – 22,000 YEARS AGO**LOCATION OF ORIGIN: SOUTH ASIA OR WEST ASIA**

The first members of this lineage lived as hunter-gatherers on the open savannas that stretched from Korea to Central Europe. They took part in the advances in hunting technology that allowed for population growth and expansions.

When the Earth entered a cooling phase, most from this line sheltered in refugia to the southeast of Europe and in West Asia. It was from these refugia that their populations rapidly expanded when the ice once more receded. Some traveled west across Europe. Others moved back toward their distant ancestors' homelands in Africa, passing through the Levant region. Through these movements and the population boom triggered by the Neolithic Revolution, this lineage and its descendant lineages came to dominate Europe.

Today, it has a wide distribution. In Africa, geneticists have found this lineage in Northern Africa (6 percent) and central Sahel (23 percent). Its frequency in Europe is at times high and at other times moderate. It represents about 7 percent of Russian male lineages, about 13 percent of male lineages in the Balkans, about 21 percent of Eastern European male lineages, 55 to 58 percent of Western European lineages, and about 43 percent of Central European male lineages. In Asia, most men of this lineage are found in West Asia (6 percent) and South Asia (5 percent). However, trace frequencies of around half a percent from this lineage are present in East Asia.

NOTABLE PEOPLE

Russian Emperor Nicholas II belonged to this lineage.

PHOTOS FROM THIS REGION

Some North Africans are descended from pre-Ice Age Asians, who later moved back into the continent from which their own ancient ancestors emerged to populate the planet.

Photograph by David Eidel, National Geographic



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BRANCH: L278

AGE: TO BE DETERMINED

LOCATION OF ORIGIN: WEST ASIA

While some from this group traveled west into Central Asia, others moved south toward the Levant region. Today, they are present in trace frequencies of less than 1 percent in Italy, the Ukraine, and the region of the Pannonian Basin.

Note: This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

POINT OF INTEREST

Those who belong to this lineage but do not belong to a descendant branch are rare.



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NEXT STEPS

Your results shown here are based upon the best information available today—but it is just the beginning. As we learn more, we may add new markers to your path, or modify your results to contain more specific information.

DNA markers require a long time to become informative. While mutations occur in every generation, it requires at least hundreds—normally thousands—of years for these markers to become windows back into the past, signposts on the human tree.

A fundamental goal of the Genographic Project is to extend these arrows further toward the present day. To do this, Genographic has brought together renowned scientists and their teams from all over the world to study questions vital to our understanding of human history. By working together with indigenous peoples around the globe, we are learning more about these ancient migrations.

WE NEED YOUR HELP

By providing us with cultural information on yourself and your more recent ancestors and telling your recent genealogical story, we can further refine our understanding of how humans migrated to where they are today.

Complete Your Profile

Under Profile or Settings, you will find fields requesting information about your recent ancestry (if these fields are not active, you'll need to click on Account Settings and opt in to contribute your results to science).

You are an important part of telling the greatest story ever told. The human story.