

YDNA Haplogroup Descriptions

The following is an abbreviated version of Charles Kerchner's page at <http://www.kerchner.com/haplogroups-ydna.htm>

R1a: The R1a lineage is believed to have originated in the Eurasian Steppes north of the Black and Caspian Seas. This lineage is believed to have originated in a population of the Kurgan culture, known for the domestication of the horse (approximately 3000 B.C.E.). These people were also believed to be the first speakers of the Indo-European language group. This lineage is currently found in central and western Asia, India, and in Slavic populations of Eastern Europe.

R1b: Haplogroup R1b is the most common haplogroup in European populations. It is believed to have expanded throughout Europe as humans re-colonized after the last glacial maximum 10-12 thousand years ago. This lineage is also the haplogroup containing the **Atlantic modal haplotype**.

I: Haplogroup I dates to 23,000 years ago or longer. Lineages not in branches I1a, I1b or I1c are found distributed at low frequency throughout Europe.

I1a: The Haplogroup I1a lineage likely has its roots in northern France. Today it is found most frequently within Viking / Scandinavian populations in northwest Europe and has since spread down into Central and Eastern Europe, where it is found at low frequencies.

I1b: The Balkan countries likely harbored this subgroup of I during the Last Glacial Maximum. Today, this branch is found distributed in the Balkans and Eastern Europe, and extends further east with Slavic-speaking populations.

E3a: This haplogroup is an African lineage. It is currently hypothesized that this haplogroup dispersed south from northern Africa within the past 3000 years, by the Bantu agricultural expansion. E3a is also the most common lineage among African Americans.

E3b: This haplogroup is believed to have evolved in the Middle East. It expanded into the Mediterranean during the Pleistocene Neolithic expansion. It is currently distributed around the Mediterranean, southern Europe, and in north and east Africa.

G: This haplogroup may have originated in India or Pakistan, and has dispersed into central Asia, Europe, and the Middle East. The G2 branch of this lineage (containing the P15 mutation) is found most often in the Europe and the Middle East.

G2: This lineage may have originated in India or Pakistan, and has dispersed into central Asia, Europe, and the Middle East. The G2 branch of this lineage (containing the P15 mutation) is found most often in the Europe and the Middle East.

J: Haplogroup J is found at highest frequencies in Middle Eastern and north African populations where it most likely evolved. This marker has been carried by Middle Eastern traders into Europe, central Asia, India, and Pakistan. The Cohen modal lineage is found in Haplogroup J*.

J2: The J2 lineage originated in the northern portion of the Fertile Crescent where it later spread throughout central Asia, the Mediterranean, and south into India. As with other populations with Mediterranean ancestry this lineage is also found within Jewish populations.

N: This haplogroup is distributed throughout Northern Eurasia. It is the most common Y-chromosome type in Uralic speakers (Finns and Native Siberian). This lineage most likely originated in northern China or Mongolia and then spread into Siberia where it became a very common line in western Siberia.

K: The K lineage is an old lineage presently found only at low frequencies in Africa, Asia, and in the South Pacific. One descendant line of this lineage is restricted to aboriginal Australians, while another is found at low frequency in southern Europe, Northern Africa, and the Middle East. .

K2: The K2 lineage is an old lineage presently found only at low frequencies in Africa, Asia, and in the Middle East. This specific line is found at low frequency in southern Europe, Northern Africa, and the Middle East.

Q: The Q lineage is the lineage that links Asia and the Americas. This lineage is found in North and Central Asian populations as well as Native Americans. This lineage is believed to have originated in Central Asia and migrated through the Altai / Baikal region of northern Eurasia into the Americas.

Q3: This haplogroup is the only lineage strictly associated with Native American populations. This haplogroup is defined by the presence of the M3 mutation (also known as SY103). This mutation occurred on the Q lineage 8-12 thousand years ago as the migration into the Americas was underway. There is some debate about which side of the Bering Strait this mutation occurred on, but it definitely happened in the ancestors of the Native American peoples.

C: Haplogroup C is found throughout mainland Asia, the south Pacific, and at low frequency in Native American populations. Haplogroup C originated in southern Asia and spread in all directions. This lineage colonized New Guinea, Australia, and north Asia, and currently is found with its highest diversity in populations of India.

C1: The C1 lineage is entirely restricted to Japan where it occurs at low frequency.

C2: The C2 lineage is distributed throughout the Polynesia, Melanesia, New Guinea, and Indonesia.

C3: This lineage is believed to have originated in southeast or central Asia. This lineage then spread into northern Asia, and then into the Americas.

O1: This haplogroup is found at very high frequency in the aboriginal Taiwanese (possibly due to genetic drift). This haplogroup probably originated in East Asia and later migrated into the south Pacific. Individuals carrying this lineage are thought to have been important in the expansion of the Austronesian language group into Taiwan, Indonesia, Melanesia, Micronesia, and Polynesia.

O2: Haplogroup O2 has two primary lines, the 465 line and the M95 line. Both lines are found in Asia. The 465 line is at high frequency in Japanese and Korean populations and at low frequency in east Asia. The M95 line is found in Southeast Asian populations (Malaysia, Vietnam, Indonesia, and southern China).

H: This haplogroup is nearly completely restricted to India, Sri Lanka, and Pakistan.

L: This haplogroup is found primarily in India and Sri Lanka, and has also spread into several Middle Eastern populations (Turks, Saudis, and Pakistanis).

P: The undifferentiated P lineage is a very rare haplogroup in populations at this time. Although it was the ancestral line to haplogroups Q and R it is only found at low frequency in India, Pakistan, and central Asia with a most likely point of origin in either central Asia or the Altai region of Siberia.

MtDNA Haplogroup Descriptions

The following is an abbreviated version of Charles Kerchner's page at <http://www.kerchner.com/haplogroups-mtdna.htm>

A, B, C, & D: Haplogroups A, B, C, & D. Native American mtDNA Haplogroups. Also see mtDNA Haplogroup X.

H: Mitochondrial haplogroup H is a predominantly European haplogroup that participated in a population expansion beginning approximately 20,000 years ago. Today, about 30% of all mitochondrial lineages in Europe are classified as haplogroup H. It is rather uniformly distributed throughout Europe suggesting a major role in the peopling of Europe, and descendant lineages of the original haplogroup H appear in the Near East as a result of migration. Future work will better resolve the distribution and historical characteristics of this haplogroup. Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Helena.

HV: Mitochondrial haplogroup HV is a primarily European haplogroup that underwent an expansion beginning approximately 20,000 years ago. It is more prevalent in western Europe than in eastern Europe, and descendant lineages of the original haplogroup HV appear in the Near East as a result of more recent migration. One of the dominant mitochondrial haplogroups in Europe, haplogroup HV pre-dates the occurrence of farming in Europe.

I: Principally a European haplogroup, haplogroup I is detected at very low frequency across west Eurasia with slightly greater representation in northern and western Europe. Given its wide, but sparse, distribution, it is likely that it was present in those populations that first colonized Europe. This hypothesis is supported by the estimate its age—approximately 30,000 years.

J*: The mitochondrial haplogroup J contains several sub-lineages. The original haplogroup J originated in the Near East approximately 50,000 years ago. Within Europe, sub-lineages of haplogroup J have distinct and interesting distributions. Haplogroup J* — the root lineage of haplogroup J — is found distributed throughout Europe, but at a relatively low frequency. Haplogroup J* is generally considered one of the prominent lineages that was part of the Neolithic spread of agriculture into Europe from the Near East beginning approximately 10,000 years ago. Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Jasmine.

J1b1: Haplogroup J1b is found distributed in the Near East and southern Iberia, and may have been part of the original colonization wave of Neolithic settlers moving around the Mediterranean 6000 years ago or perhaps a lineage of Phoenician traders. Within haplogroup J1b, a derivative lineage haplogroup J1b1 has been found in Britain and another sub-lineage detected in Italy. Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Jasmine.

K: The mitochondrial super-haplogroup U encompasses haplogroups U1-U7 and haplogroup K. Haplogroup K is found through Europe, and contains multiple closely related lineages indicating a recent population expansion. The origin of haplogroup K dates to approximately 16,000 years

ago, and it has been suggested that individuals with this haplogroup took part in the pre-Neolithic expansion following the Last Glacial Maximum. Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Katrine.

N*: Haplogroup N*. The N superhaplogroup has been characterized as pan-Eurasian. Haplogroup N is one of the two major trunks emerging from the original African root, and dates to approximately 65,000 years ago. Interestingly, several sub-haplogroups of the N cluster—haplogroup N1 and derivative lineages—have been detected in the Near East, suggesting either early divergence near the root of haplogroup N or subsequent migrations back towards western Eurasia following the original dispersal into east Eurasia.

N1c: N1c specific mitochondrial haplogroups are typically found in different regions of the world, and this is due to unique population histories. In the process of spreading around the world, many populations—with their special mitochondrial haplogroups—became isolated, and specific haplogroups concentrated in geographic regions. Today, we have identified certain haplogroups that originated in Africa, Europe, Asia, the islands of the Pacific, the Americas, and even particular ethnic groups. Of course, haplogroups that are specific to one region are sometimes found in another, but this is due to recent migration.

T: Haplogroup T is believed to have lived around 17,000 years ago in Northern Italy. Tara's people would have come from the Near East, and her descendants spread all over Europe. Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Tara.

T1: MtDNA Haplogroup T1 Project

U2: Mitochondrial haplogroup U2.

U5: The mitochondrial super-haplogroup U encompasses haplogroups U1-U7 and haplogroup K. Haplogroup U5, with its own multiple lineages nested within, is the oldest European-specific haplogroup, and its origin dates to approximately 50,000 years ago. Most likely arising in the Near East, and spreading into Europe in a very early expansion, the presence of haplogroup U5 in Europe pre-dates the expansion of agriculture in Europe. Haplogroup U5a1—a lineage within haplogroup U5—arose in Europe approximately 30,000 years ago, and is mainly found in northwest Europe. In the context of its rather ancient origin, the modern distribution of haplogroup U5a1 suggests that individuals bearing this haplogroup were part the initial expansion tracking the retreat of ice sheets from Europe. Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Ursula.

U6: The mitochondrial super-haplogroup U encompasses haplogroups U1-U7 and haplogroup K. Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Ursula.

U7: The mitochondrial super-haplogroup U encompasses haplogroups U1-U7 and haplogroup K. Haplogroup U7 has a Near Eastern origin approximately 30,000 years ago. Within Europe, it occurs at low frequency in the Caucasus. Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Ursula.

V: Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Velda.

W: Haplogroup W is a "daughter" of N and a "sister" of R, I, X, & A.

X: Haplogroup X is found in Europe and Asia, and is believed to have migrated to the Americas about 15,000 years ago, making up a very small component of the Native American population. Bryan Sykes in his *Seven Daughters of Eve* book named this mtDNA haplogroup Xenia.

