

## Glossary

We have created a glossary below to help your understanding. If you have a question that is not answered below, please feel free to contact us and ask us anything.

**Ancestral Clan Mother:** A woman who lived between 10,000 and 200,000 years ago and is considered to be the ancient maternal ancestor from whom all people in a particular clade (clan) are descended.

**Ancestral Clan Father:** Ancestral Clan Father: A man who lived between 5,000 and 80,000 years ago and is considered to be the ancient paternal ancestor from whom all men in a particular clade (clan) are descended.

**Ancestry:** A person's line of descent.

**Anthropology:** The study of humankind, including the comparative study of societies and cultures, and the science of human zoology and evolution.

**Cambridge Reference Sequence:** The mitochondrial DNA sequence found most commonly in those people who have maternal roots in West Eurasia. This sequence is the same as that for the root node of the clan mother, Helena.

**Chromosome:** A strand of DNA and associated proteins in the nucleus of animal and plant cells. The chromosomes carry the genes and functions in the transmission of hereditary information.

**Clade:** A group comprising all the evolutionary descendants of a common ancestor. In the scientific literature, clades are given letter and number designations, like H, U4 and L3a1. Professor Sykes introduced the concept of giving names to the originators of the clades, like Helena, Ulrike and Lamia, and using the term "clan" instead of clade to describe the group. Oxford Ancestors continues the use of this convention in both its maternal and paternal ancestry services.

**Clan Mother:** See Ancestral Clan Mother.

**Correlate:** To have a connection in which one thing affects or depends on another.

**CRS:** See Cambridge Reference Sequence.

**DNA:** Short for DeoxyriboNucleic Acid. The genetic material carried by all animals and plants that allows transmission of characteristics from one generation to the next.

**DNA Letters:** The DNA molecule is composed of a string of four chemicals called adenine, cytosine, guanine and thymine, normally abbreviated to A, C, G and T, respectively.

**DNA Sequence:** The order or arrangement of the DNA letters making up the DNA molecule.

**Genealogy:** A line of descent traced continuously from an ancestor or the study of lines of descent.

**Genetic Ancestry:** Line of descent supported by genetic evidence.

**Genetics:** The study of heredity and the variation of inherited characteristics or the genetic properties or features of an organism.

**Genetic Marker:** Any part of the DNA molecule that expresses variability within a population and that can be used for analysis of that population.

**Genome:** The complete genetic make-up of an organism.

**Haplogroup:** A group containing all the direct descendants of a single person (man or woman) who had and passed-on a specific genetic marker or mutation.

**Heredity:** The passing on of physical or mental characteristics genetically from one generation to another.

**Humanity:** The human race. Our species, Homo sapiens.

**Man's Migration:** The movement of historic populations of Man out of Africa and across the continents of the world.

**Metabolism:** The chemical processes occurring within an organism that are necessary for the maintenance of life.

**Migration Routes:** The lines of travel taken by our ancestors as they migrated out of Africa and colonised the other continents.

**Mitochondrial DNA:** Usually abbreviated to mtDNA. A circular strand of DNA and associated proteins in the mitochondrion (singular of mitochondria) that carries the genes and functions in the transmission of hereditary information.

**Mitochondrial Eve:** Also known as African Eve. The human female who lived approximately 200,000 years ago and from whom everyone on this planet is descended through the maternal line.

**Mitochondria:** Plural of mitochondrion. A spherical or elongated organelle in nearly all animal and plant cells, containing genetic material and many enzymes important for cell metabolism, includes those responsible for the conversion of food to usable energy.

**mtDNA:** See Mitochondrial DNA.

**Mutation:** A change of the DNA sequence within a gene or chromosome of an organism resulting in the creation of a new character or trait not found in the parental type.

**Maternal Clan Names:** In his book "The Seven Daughters of Eve", Professor Sykes named the seven clan mothers whom the great majority of people with European maternal ancestry are descended from. Their names are: Helena, Jasmine, Katrine, Tara, Ursula, Velda and Xenia. The names of the other 29 known clan mothers in the world are: Fufei, Ina, Aiyana/Ai, Yumi, Nene, Naomi, Una, Uta, Ulrike, Uma, Ulla, Ulaana, Lara, Lamia, Lalamika, Latasha, Malaxshmi, Emiko, Gaia, Chochmingwu/Chie, Djigonasee/Sachi, Makeda, Lingaire, Lubaya, Limber, Lila, Lungile, Latifa and Layla.

**Organelle:** A structure within a cell, such as a mitochondrion, that performs a specific function.

**Organism:** An individual animal, plant or single-celled life form.

**Paternal Clan Names:** Professor Sykes has named the 15 commonly described Ancestral Clan Fathers who are the ancient paternal ancestors of the entire human race. Their names are: Amadlozi, Baatsi, Maui, Thang-la, Eshu, Gilgamesh, Himalaya, Wodan, Re, Lhotse, Mandala, Nentsi, Yi, Quetzalcoatl and Oisín.

**Probability:** The extent to which something is likely to happen or to be the case.

**Professor Sykes:** Bryan Sykes is Professor of Human Genetics at the University of Oxford. He is the author of "The Seven Daughters of Eve", "Adam's Curse" and "Blood of the Isles" and is the founder and chairman of Oxford Ancestors.

**Root Node:** The original sequence of any specific clan mother or father. Our MatriLine certificates identify the clan mothers' root nodes with serrated edges.

**Sampling Kit:** Our sampling kit consists of a small brush that we ask you to rub against the inside of your cheek to collect, painlessly, cells for DNA extraction. From this sample we will extract your mtDNA or yDNA.

**Sequence:** See DNA Sequence.

**Sequencer:** The apparatus used to determine the sequence of a DNA molecule. These machines tend to be large (more than 100kg) and cost over £150,000 (\$200,000).

**Sequencing:** The determination of the order of the four DNA letters within the DNA molecule. Once the DNA is extracted and purified from a cell sample, it is amplified and the sequence determined using a DNA sequencer.

**Signature:** See Y-Clan Signature.

**Sons of Adam:** This is the name Oxford Ancestors has given to the 15 named ancestral clan fathers from whom the entire human race is descended.

**Tribes:** Traditionally used to describe a large number of people with the same culture and dialect.

**Tribes of Britain:** A service that we offer whereby an analysis of the Y-Clan Signature can be used to assess the likely origin of a Y-chromosome. Approximately 95% of the Y-chromosomes in the British Isles can be placed in the following categories: Celtic, Anglo-Saxon/Danish Viking and Norse Vikings.

**X-chromosome:** The sex chromosome associated with female characteristics in mammals, occurring paired in the female and single in the male.

Y-chromosome: The sex chromosome associated with male characteristics in mammals, not occurring in females and occurring with one X-chromosome in the male sex-chromosome pair.

Y-chromosome Adam: The human male who lived approximately 80,000 years ago and from whom every man on this planet is descended through the paternal line.

yDNA: The DNA making up the Y-chromosome.

Y-Clan Signature: A series of fifteen numbers, each one corresponding to a specific genetic marker on the Y-chromosome.

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