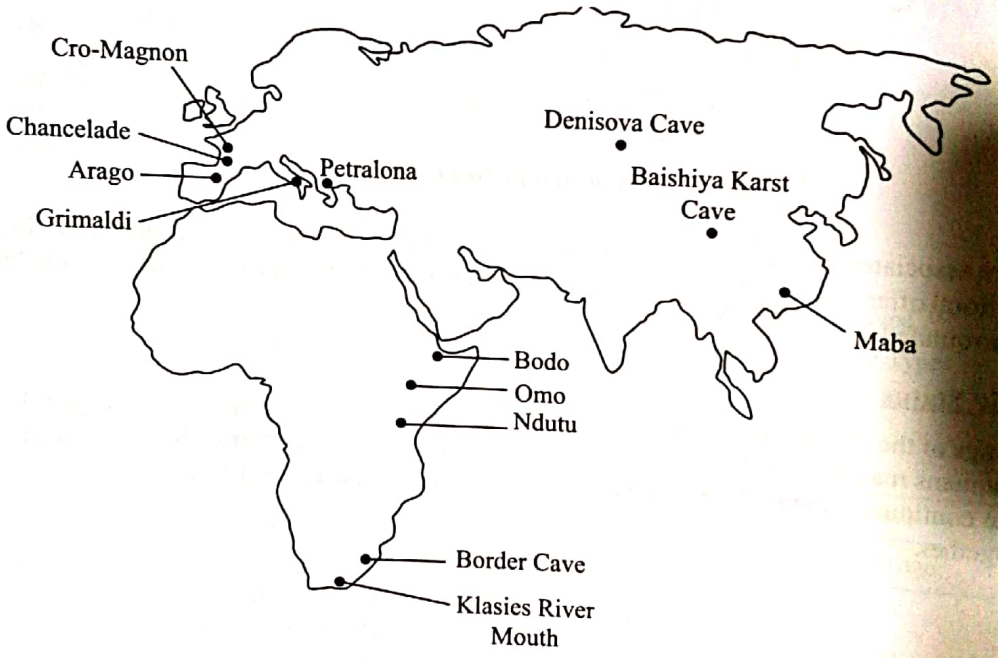
Q.10 What do you understand by the term Homo sapiens? Give an account of the distribution and physical features of the earliest fossils of Homo sapiens. (20M)

Homo sapiens, meaning 'wise man' is the only extant species of the genus Homo.

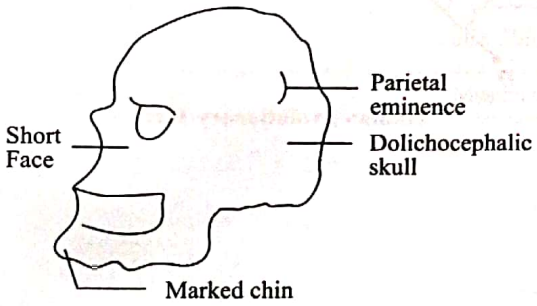
There are a series of African and Eurasian fossils that are different from H. erectus and H. neanderthalensis, and yet are not exactly the same as modern H. sapiens. Following *Wolpoff's* lead, these are referred to as early or archaic H. sapiens.

Geographical Distribution



Features of early fossils

1. **Cro-Magnon Man** Present day Ranches of canary island are considered representative
   - 1.1. Discovery – In 1868 by *Lartet,* in the form of five skeletons found from a cave in Cro-Magnon (France)
   - 1.2. Time Span – 40,000-30,000 years ago
   - 1.3. Cranial Capacity – 1550-1650 cc
   - 1.4. Skull



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1.5. Dentition – Parabolic dental arcade, dental formula – 2,1,2,3 and small sized teeth

1.6. Postcranial anatomy – Longer hind limbs indicate efficient bipedalism. It had a muscular and tall built, with height estimated to be around 170-180 cm.

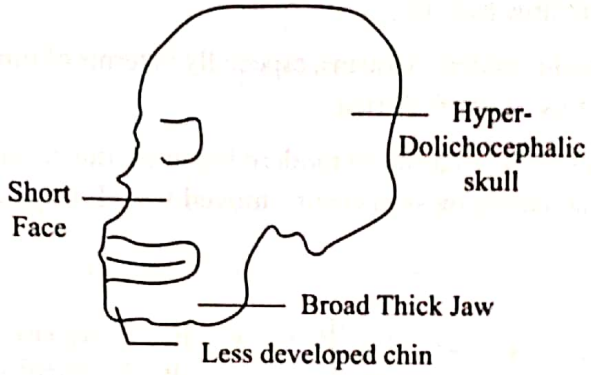
2. Grimaldi Man considered by Anthropologists as evidence of Negroid race in Europe in Aurignacian time

2.1. Discovery – In 1901, in the form of two skeletons found from Grimaldi (Italy)

2.2. Time Span – 25,000 years ago

2.3. Cranial Capacity – 1250-1450 cc

2.4. Skull



2.5. Dentition – Same as Cro-Magnon, but with relatively larger sized teeth

2.6. Postcranial anatomy – Hind limbs are very much longer than fore limbs, again indicating efficient bipedalism. Its height is estimated to be around 150-160 cm.

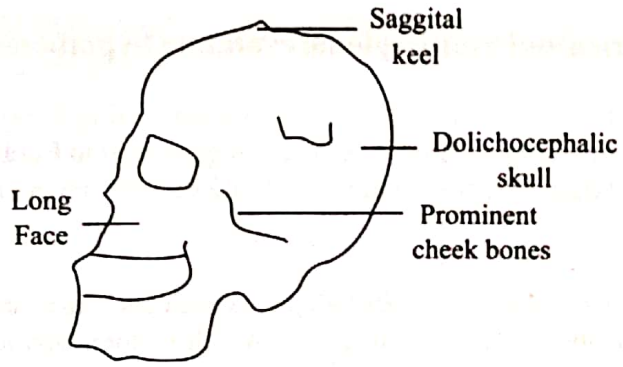
3. Chancelade Man considered to have given birth to Eskimos due to physical & cultural similarities.

3.1. Discovery – In 1888, in the form of a male skeleton found buried in a flexed position with knees touching the jaw

3.2. Time Span – 17,000–12,000 years ago

3.3. Cranial Capacity – 1500-1700 cc

3.4. Skull



3.5. Dentition –Same as Cro-Magnon

3.6. Postcranial anatomy – The limb bones are strong and massive, with upper limbs comparatively longer. Its height is estimated to be around 150-160 cm.

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Cultural Features

Both Cro-Magnon and Grimaldi Man are associated with the Aurignacian culture of European Upper Palaeolithic. Their tool kit included blade flakes and bone tools. Cave paintings have also been found.

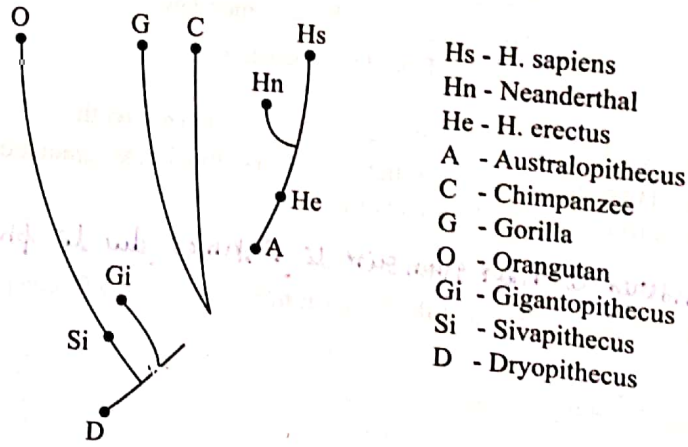
Chancelade Man is associated with Magdalenian culture that succeeded Aurignacian culture. Tool kit included blade and bone tools like harpoons, needles, hooks.

Phylogenetic Status

The phylogenetic status of Cro-Magnon man remains unclear, as similar fossils have been found from Africa and Europe, but both dating to different time periods.

The Grimaldi man is comparable to the modern Africans, especially in terms of limb proportions. *Boulehas* compared it to the Bushmen and the Hottentots of South Africa.

The Chancelade man is believed to be the ancestor of modern Eskimos, due to similar morphological features. It is believed that with the retreat of glaciation, these ancestors moved from Europe to North America, evolving to the modern Eskimo population.



Human Evolutionary Tree

Q.11 Discuss the Out of Africa and Multiregional evolution hypotheses. (20M)

Out of Africa and Multiregional evolution hypotheses are two competing hypotheses on the origin of modern humans. Both agree that Homo erectus originated in Africa and expanded to Eurasia about one million years ago, but they differ in explaining the origin of modern humans (Homo sapiens sapiens).

Out of Africa Hypothesis

Early major proponents of this theory were led by British palaeontologist *Chris Stringer*. It proposes that a second migration out of Africa happened about 100,000 years ago, in which anatomically modern humans of African origin conquered the world by completely replacing archaic human populations (Homo sapiens) (Model A). Thus, it implies that Homo sapiens sapiens emerged only from one place, that is Africa, from where they migrated to the rest of the world.

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