

The Emergence of *Homo sapiens* in South Asia: The Central Narmada Valley as Witness

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ABSTRACT

The emergence of anatomically modern *Homo sapiens* in South Asia is hotly debated due to a great gap in fossil record. A solitary partial cranium from Hathnora dated around 250 Kya is debated and conveniently interpreted as "evolved" *Homo erectus* or "archaic" *Homo sapiens* or *Homo heidelbergensis* or even *Homo indet.* Cranial fossils of Pre-Toba or post-Toba anatomically modern *Homo sapiens* are unknown barring the very late 30 Kya modern human remains from Sri Lanka. The present paper reviews the scenario of human evolution in South Asia with special reference to the cranial and recent postcranial fossil findings by the author in association with the archaeological evidences from Central Narmada valley. It is concluded that the Narmada fossils and archaeological findings support the presence of three hominins- two 'archaic' and one 'early modern'. The Mode 2 Acheulian hominin represented by the calvarium and the femur was a 'large-bodied' species akin to *Homo heidelbergensis*. It appeared first in the Central Narmada valley and was followed by a 'small-bodied' Mode 3 archaic type represented by two clavicles and the 9th rib, provisionally named here as *Homo narmadensis*. It likely continued and attained anatomical and behavioural modernity in South Asia as attested by the humerus and bone artifacts, and diversified to various short-bodied indigenous populations of South Asia supports the genomic evidences.

KEYWORDS: *Homo erectus*, *Homo heidelbergensis*, *Homo sapiens*, *Homo narmadensis*, cranial and postcranial hominin fossils, bone artifacts

INTRODUCTION

Three pivotal issues confront palaeoanthropologists worldwide: (1) The Last Common Ancestor of the Chimpanzee-Hominids, (2) the *Homo erectus*-*Homo sapiens* Interface, and (3) the emergence of modern *Homo sapiens*. Indian palaeoanthropology can contribute potentially for the understanding of these issues if Indian evidences are interpreted on their own merits without preconceived views. Though there are a number of notable archaeologists and mammalian palaeontologists in India, but she lacks practicing palaeoanthropologists to defend and place Indian hominoid and hominid evidence on their merit.

Here, I shall focus on the second and the third aspects, and only touch upon the first dealt with in greater detail in various publications (Sankhyan, 1988, 1990, 1998, 2007). The hunt for the purported 'chimpanzee-human' last common ancestor (LCA) in African fossil records has so far proved futile. Numerous fossil collecting from all over the Old World reveal a peculiar distribution pattern of the Late Miocene hominoids and Plio-Pleistocene

hominids. While African continent is rich or the only source of Early Miocene fossil apes between 14 to 20 Mya, it has demonstrated meager or fragmentary evidences of the Middle to late Miocene hominoids between 13 to 7 Mya, a period crucial for the differentiation of the 'LCA'. This period both in Asia and Eurasia has demonstrated rich occurrences and diversity of the hominoids, who essentially exhibit a more morphological affinity between the Southeast Orangutan and the Plio-Pleistocene African hominids (Schwartz, 1987; Grehan & Schwartz, 2009; Sankhyan, 1988, 2007); the focus has shifted to Asia (Dennell and Roebroeks, 2005).

The *Homo erectus*- *Homo sapiens* Transition or *H. heidelbergensis*: When and Where?

Archaic hominin morphology fairly goes in line with Palaeolithic technological development in the Old World. Large Flake Acheulian handaxe-cleaver technology of *Homo erectus* was a great advance over the crude Oldowan choppers of *Homo habilis*. This made *Homo erectus* a versatile hunter and a global trotter successfully adaptive to new environmental opportunities expanding and populated tropical and subtropical zones as far as the South East Asia. This migration could have not been possible without acquiring greater intelligence and better hunting skills and use of fire. This territorial expansion most likely began around 1.8-1.7 million years ago and coincides with progressively cooling climate of Europe and Asia. By half a million years ago, some *Homo erectus* populations were able to move into the seasonally cold temperate zones of Asia and Europe. Surprisingly, however, *Homo erectus* remained little changed anatomically until about 800 Kya, whereafter his brain expanded and approached modern humans. The robust features like the sagittal ridge and torus angularis in *Homo erectus* likely became vestigial pleisiomorphies simply retained in some later hominins but vanished in other during evolution to *Homo sapiens*.

The transition from *Homo erectus* to *Homo sapiens* probably started as early as 400 Kya and 250 Kya. This was the later Middle Pleistocene in which we see a trend in brain expansion and refinement in stone tool technologies. There are many morphologically intermediate specimens discovered all over the Old World, which indicate continuity between late *Homo erectus* and early *Homo sapiens*. Such intermediates are called "archaic" *Homo sapiens* or also known by a new species, *Homo heidelbergensis* (Rightmire, 1998).

The type specimen of *Homo heidelbergensis* is Mauer 1, discovered in 1907 in the Mauer sand pits near Heidelberg, Germany and most likely 500 Kya. Another is 600 kyr

Bodo cranium with 1100cc brain volume was discovered in 1976 at Bodo in the Middle Awash Valley of Ethiopia. The Arago cave cranium (Tautavel) in the eastern Pyrenees Mountains, France has 1166cc brain volume also appears to be *Homo heidelbergensis*. The Petralona 1 cranium discovered in 1960 in Greece, dated to be around 300-400 Kya, originally attributed to *Homo neanderthalensis*, and later classified as *erectus*, is now attributed to *Homo heidelbergensis* specimens. It has a large double-arched brow ridge, massive face and 1220 cc brain volume. There are other important specimens like, Kabwe, Steinheim and Atapuerca, including the Dali cranium of China attributed *Homo heidelbergensis*. The Kabwe Man from Broken Hill in Zambia discovered in 1921 and dated to 200-125 Kya is often cited as the example of typical *Homo heidelbergensis* in Asia. It is a very heavy-boned complete cranium with large brow ridges and a receding forehead; the brain size equals to that of modern humans.

The type specimen Mauer 1 shows a host of both primitive and derived features that have been accepted as proof of ancestry to the Neanderthal line. In general, *Homo heidelbergensis* specimens show a continuation of evolutionary trends that occurred in the Lower Pleistocene into the Middle Pleistocene. Along with changes in robusticity of cranial and dental features, there is a marked increase in brain size from *Homo erectus* to *Homo heidelbergensis*. The striking morphological features of these are enlarged brain, divided or curved brow ridges unlike a continuous rim of the *Homo erectus* of China and Java. It also lacks the sagittal midline thickening of the braincase, occipital torus and thickened ear region and mandibles *Homo erectus*. Its skull shows moderate development with receding foreheads lacking in Java *Homo erectus* compared to the Peking man. The difference is also visible in the relatively larger brain volume; *Homo erectus* has 800-1000cc whereas *Homo heidelbergensis* had 1200cc. The skull is conspicuously larger; it is longer and low-shaped with relatively rounded braincase; the brow ridge was large but discontinuous, flatter face without chin; its skeleton and teeth are usually smaller compared to *Homo erectus* but larger than in modern humans.

Homo heidelbergensis is known to have lived from at least 600 Kya in Africa and Europe to maybe as late as 250 Kya in some areas. They routinely butchered large animals with Acheulian Lanceolate hand axes, wooden spears, and Mousterian stone tools. *Homo heidelbergensis* was an accomplished tool-maker and organized skillful hunter, and almost certainly used fire and therefore was the first early human species to live in colder climates. His short and wide body is likely an adaptation for conserving heat.

The skull of *Homo heidelbergensis* is intermediate between *Homo erectus* and the anatomically modern *Homo sapiens*. There is no clear dividing line between late *Homo erectus* and *Homo heidelbergensis*; so many fossils between 500- 200 Kya make it difficult to pick up one as direct ancestor of *Homo sapiens*. DNA reveals that Neanderthal and *Homo sapiens* shared a common ancestor about 400 Kya in *Homo heidelbergensis* which diverged to *Homo neanderthalensis* in Europe and to *Homo sapiens* in Africa, including perhaps the Denisovans in Asia.

Emergence of Modern *Homo sapiens*

Compared to the Neanderthals and other late archaic humans, modern humans generally have more delicate skeletons with less massive musculature, the skulls more rounded and the brow ridges less protruding, lacking the occipital buns of the Neanderthal skulls; the foreheads higher, faces smaller with pointed chins. With such features the Cro-Magnon are the first fossil clearly modern humans emerged around 27 Kya in a rock shelter near Les Eyzies in southwestern France. They looked like modern Europeans, the males taller (1.6-1.8 m.) than Neanderthals, brains larger up to 1590 cm³, larger than today's people; the foreheads higher and faces broad with pointed chins.

But how old are the earliest modern humans? When and where did the “archaic” *Homo sapiens* = *Homo heidelbergensis* evolve to anatomically modern *Homo sapiens*, is still hotly debated. As for the *Homo erectus*-*Homo heidelbergensis* transition, the first emergence of modern humans is again generally considered an African event probably between 200-150 Kya in the Middle Palaeolithic; the Idaltu or Omo 1 man in Ethiopia considered the first modern *Homo sapiens* around 160 Kya, but Lee and Wolpoff (2007) contested in favour of the Herto Man around 160 Kya in the Middle Awash area of Ethiopia as the better ancestor. Herto had modern rounded skull with archaic large brow ridges. Somewhat more advanced transitional forms have been found at Laetoli in Tanzania about 120 Kya in South Africa about 115 Kya indicating southward expansion of modern *Homo sapiens* within African continent. Around 100 Kya modern *Homo sapiens* had expanded their range into Southwest Asia (Israel). But, there is no reliable evidence of modern humans elsewhere in the Old World until 60-40 Kya.

The colonization of the Old World by the African *Homo sapiens* by replacing the indigenous regional late *Homo erectus* and *Homo heidelbergensis* populations is called

‘Single Origin’ or “African Eve” theory or “Noah’s ark” model. The ‘Out of Africa’ theory clashed for long with the “Regional Continuity” or ‘Multiregional’ theory, which postulates that modern *Homo sapiens* evolved from the regionally differentiated populations of late *Homo erectus* or *Homo heidelbergensis* = archaic *Homo sapiens*. Currently, palaeoanthropologists agree on partial ‘assimilation’ which does not preclude some multiregional evolution and some admixture of the migrant modern *Homo sapiens* with the existing regional archaic populations. This has been very recently re-asserted by Alan Templeton (2012) who concluded:

“Gene flow is a genetic interchange between local populations within a species.These studies also revealed that when anatomically modern humans first expanded out of sub-Saharan Africa starting 130 000 years ago, they interbred at low levels with the archaic Eurasian populations that they encountered, thereby falsifying the hypothesis that anatomically modern humans completely replaced genetically the archaic populations that they encountered. This conclusion has been confirmed by direct studies on ancient DNA and fossils.”

DNA suggests a genetic homogeneity among all present-day people of the world belonging to a single L3 lineage of relatively recent evolution. Genetic differences among them occurred as smaller groups of people moved into new environments, such as skin colour, nose form, and the ability to breathe more efficiently at high altitudes. These adaptive traits are considered as a very small component of the *Homo sapiens* genome. Recent DNA evidence also suggests that several haplotypes of Neanderthal origin are present among all non-African populations and *Denisova* hominins, and may have contributed up to 6% of their genome to present-day humans. We are yet to document through fossils the 60-70 Kya L3 mtDNA lineages in South Asia.

The Status of Narmada Prehistoric Men

The recent human fossil evidences from the Central Narmada valley (Sankhyan *et al.*, 2012a,b) have confirmed presence of three hominins in Pleistocene, two archaic and one early modern (Figures 1 to 4). Among the two archaic, one was a ‘large-bodied’ hominin represented by the partial Skullcap (calvarium) and a recent femur fossil, and the other was a ‘short and stocky’ pygmy-sized *Homo sapiens* represented by two clavicles (collarbones) and a left 9th rib. The third is an ‘early modern’ *Homo sapiens* represented by a recent finding of the left humerus.

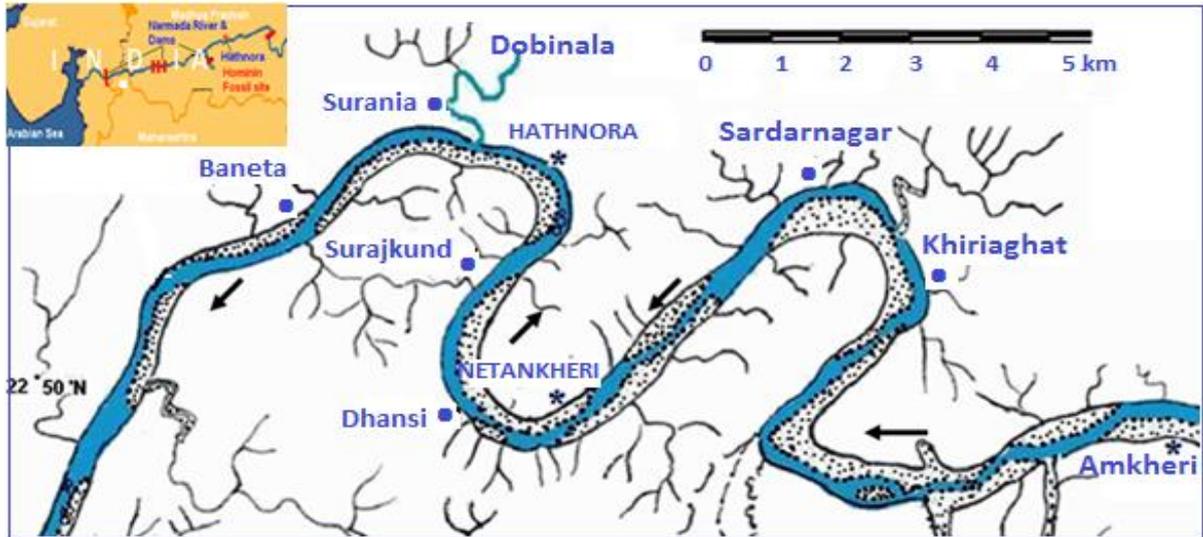


Figure 1. Map of a portion of the Central Narmada valley around Hathnora showing hominin yielding sites marked with star (modified from Sankhyan *et al.*, 2012b)

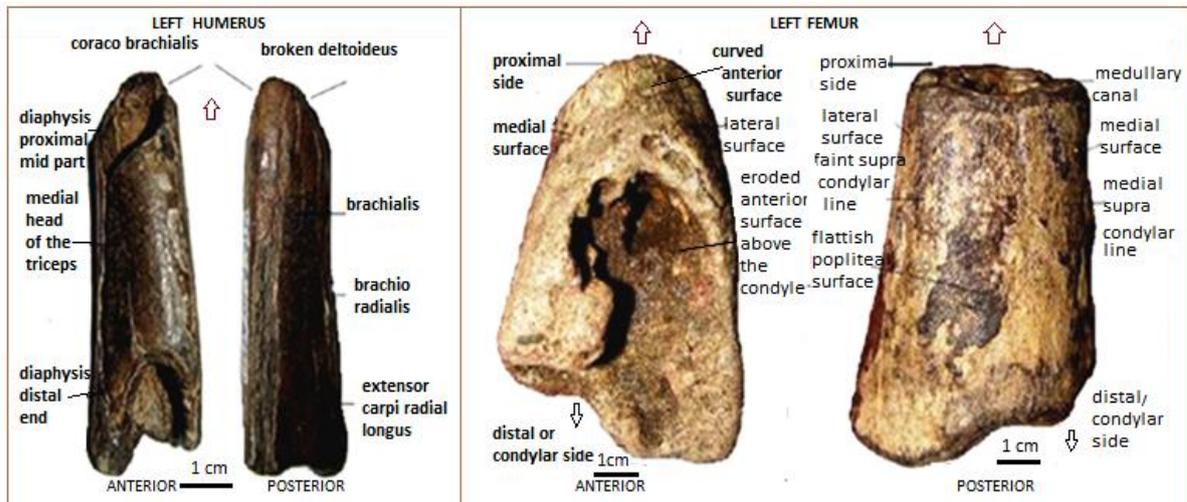


Figure 2. New fossils of the left humerus and the left femur shaft portions from Netankheri, Central Narmada valley (Sankhyan *et al.*, 2012b)

1. The 'Large-bodied' Narmada Hominin

The Narmada partial skull cap (calvarium) has been debated late *Homo erectus* (Lumley and Sonakia, 1985b; Dambricourt Malassie, 2009) or archaic *Homo sapiens* (Kennedy *et al.*, 1991; Kennedy, 2000, 2007). Cameron *et al.* (2004) have taken out Narmada calvarium from the *Homo erectus* domain and included it in the Steinheim and *Homo heidelbergensis* and considered it a European migrant to South Asia. The author (Sankhyan, 2005, 2007) reviewed the calvarium for metric and non-metric traits and noted its maximum metric similarities with Petralona, followed in the decreasing order by La Ferrassie, the La Chapelle Aux Saint, the Kabwe/Dali/Zkd 10 / Ngadong11/Sangiran17, the Ceprano and Steinheim.

But, Martinez & Arsuaga (1997) regarded the Petralona and other European forms grouped under Neanderthals showing local affinities.



Figure 3A: Excavations conducted by the author and his team at U1 level of Hathnora hominin calvarium site yielded *in situ* mandible of *Elephas namadicus* and other mega fauna including over a hundred ‘Large Flake Acheulian’ handaxes, cleavers and chopping tools for the first time (Sankhyan *et al.*, 2012b) **Figure 3B:** Author’s revisit to Netankheri hominin locality in October 2012 yielded more Palaeolithic findings recovered *in situ* from the humerus bed shown in Figure 4B (bottom left).



Figure 4: A. The fossils and archaeological findings of the ‘large-bodied’ Acheulian (Mode 2) Narmada hominin provisionally named here *Homo narmadensis*. B. The ‘small-bodied’ Mode 3 *Homo bamanensis* and ‘early modern’ *Homo sapiens* (modified from Sankhyan *et al.* 2012b).

Overall, Narmada skullcap is classifiable gradistically with the “archaic” *Homo sapiens* or *Homo heidelbergensis* or cladistically either *Homo heidelbergensis* (Athreya 2007) or a distinct unknown species, *Homo indet.* The recent femur from Netankheri just 3 km upstream from Hathnora shows a robust morphology of the ‘large-bodied’ hominin intermediate between *Homo erectus* and the *Homo neanderthalensis*. Quite likely therefore the Hathnora calvaria and the Netankheri femur are derived from the same hominin species which was very akin to *Homo heidelbergensis*, if not a new species.

1. The 'short and stocky' Narmada archaic Hominin

The two clavicles and the 9th rib are important for estimating the body dimensions of the hominin (Sankhyan, 1997a, b, 2005, 2007; Sankhyan & Rao, 2007) useful in understanding hominin adaptations. The clavicles yielded a fair estimate of the upper chest or breadth across the shoulders as well as the antero-posterior depth of the thorax; the 9th rib reflects the maximum expanse of the lower thorax or the shape and size of the trunk. In addition, the clavicle length also provides a fair estimate of the stature. The conoid indices of the Narmada clavicles closely go with the mean value of modern humans or the lower value of the Andaman pygmy, suggesting a modern type moderate chest depth and warm-humid tropical adaptation. Its diaphyseal robusticity indicates body build and life styles or occupations and ecological adaptations of the early hominins (Pearson, 2000). The midshaft index further attests the same showing diaphyseal rounding touching the lower threshold of *Homo sapiens*. The diaphyseal rounding shows interesting evolutionary trend from the primitive platycleidy of Plio-Pleistocene hominids, the mesocleidy of the Neanderthals and the eurycleidy of modern humans (Sankhyan, 1999b).

Population	N	CL/STR	Andamanese [Females]			Inference for Narmada <i>Homo</i>		
			Min.	Mean	Max	Min	Mean	Max
Onge (Gupta <i>et al.</i> 1960)	7	CL	10.1	10.7	11.1	-	90.0	-
		STR	146.8	149.6	151.9	125.8	130.0	123.2
Onge (Chatterjee 1956)	23	STR	129.1	139.0	147.1	115.0	116.9	119.2
Andamanese (Flower 1880)	18	CL	9.5	10.7	11.6	-	90.0	-
		STR	130.2	137.5	148.1	123.3	115.7	114.9
Onge* female (R. Sahani, Personal Communication)	35	STR	130	137.99	142	-	-	-

Table 1: Estimation of the Stature of Narmada *Homo* based on the Clavicle length (CL) and Stature (STR) of the Andaman Islanders by Unitary method. *Mean and range values of the biacromial diameter of female Onge = 28 (30.14) 33 cm; CL=clavicle length, STR=stature

Employing various methods the author achieved the varying stature estimates ranging from 115 to 135 cm (Table 1). The maximum estimate tallies with the lower value of the female Onge and the Greater Andamanese, both skeletal and living. Similarly, a value of 30.6 cm shoulder width estimated for Narmada right clavicle corresponds to the mean biacromial diameter of 29 female Onge with a narrow range of 29 – 33.5 cm (Chatterjee, 1956) indicating that the Narmada hominin had similar Pygmy body dimensions.

Given the above evidence there is definite presence of the 'short and stocky' archaic hominin in Central Narmada valley that was different from the 'large-bodied' one. But, due to no specific nomenclature it was often confused and neglected. The author therefore feels the necessity of a formal *nomen* provisionally given here as *Homo narmadensis* who was the potential carrier of the Mode 3 culture in South Asia and probably of the early Mode 4 as well as documented at Netankheri.

The Netankheri humerus was found in association with Middle Palaeolithic (Mode 3) tools and with bone implements found for the first time in Narmada valley. They are dark in hue and possess evidence of fire treatment or charring besides dental marks on a few. Most of the bone tools include humeral and femoral distal and mid shaft splits, but antler, scapular and rib fragments are also used. They have the evidence of retouches on the working edge. Typo-technologically they appear of late Mode 3 or early Mode 4; there are different types, viz., a hand-held dagger, spatulas, scrapers, drills, awls, burins and blades. The associated mixed later Middle Palaeolithic and early Upper Palaeolithic stone and the bone tools indicate continuity and diverse technological skills and adaptations to the changing sedimentary regime, found in early anatomically modern *Homo sapiens*.

The absolute dating of the Netankheri humerus is yet to be done. But, its location is below the Youngest Toba Ash is datum of ~75 Kya located higher in the overlying Baneta and Hirdepur formations in Narmada and its tributaries (Tiwari & Bhai, 1997). If that is true then the Netankheri humerus could be older to the YTA datum. The fauna and archaeological findings also allow a date interval for the humerus between 80 and 70 Kya.

DISCUSSION AND CONCLUSIONS

Thus, the known evidences indicate presence of two types of archaic hominins and an early modern human in Narmada valley during Middle to early Late Pleistocene times (~250 to 70 Kya). The "large-bodied" species (*Homo heidelbergensis*) was wide spread during the Middle Pleistocene in the lower level (U1) of the Surajkund formation which hunted megamammals with typical Mode 2 Acheulian implements. A distinct change occurred in the climate and ecology at the Mode 2 / Mode 3 transition visible in the faunal content, which was not favourable for the Large Flake Acheulian hunter who consequently migrated to other parts. Author's recent archaeological studies at Susunia (Sankhyan *et al.*, 2009a, b) have

demonstrated northward movements of the Late Acheulian man, some branches of which also migrated southeastward to the Bastar region (Sankhyan *et al.*, 2011).

The changed ecology gave way to a 'short-stocky' Mode 3 man (*Homo narmadensis*) who emerged at around 150 Kya in Narmada valley and possibly colonized the entire peninsular India throughout the Middle to Upper Palaeolithic. Possibly, the entire South Asia was colonized by populations of *Homo narmadensis* which evolved and splitted to several similar-sized populations, such as the proto-Australoids and the pygmies. The latter colonized the Southeast Asia and Andaman Islands, and it is not unlikely that the African Pygmy have ancestry in *Homo narmadensis* in Indian heartland.

The genomic evidence supports a model of early divergence of African KhoeSan (the Bushmen) ancestor from a proto-Pygmy non-Pygmy group about 110 Kya (Veeramah *et al.* 2011) contending that the KhoiSan were oldest human race followed by the Pygmy. The latter expanded to the equatorial Africa, and also believed to have migrated very early to the Southeast Asia, such as New Guinea and Philippines (Aeta), Malaya (Semang), Thailand (Mani), Andaman archipelago (Jarawa/Ang, Onge, Greater Andamanese and Sentinel), Flores Island (Rampasasa) and Vanuatu archipelago, when most of these islands were not separated or were fissured by narrow seas.

Champions of "Out of Africa" hypothesis also speculated early entry of African 'modern' *Homo sapiens* in the later Middle Pleistocene of South Asia carrying Mode 3 technology (James & Petraglia 2005), and so for the early Khoisan (Bushmen) and Pygmy ancestry in Africa and beyond. If more evidences corroborate then the *Homo bamanensis* may turn out to be the possible common ancestor of the KhoeSan and the Pygmy who entered into the Central Narmada valley around 150 Kya possessing Mode 3 technology? If so, further evolution of the anatomically modern *Homo sapiens* is now documented by the recent humerus about 80 Kya and the "volcanic winter" was not a major hurdle even though it could have been a great disaster first experienced by the hominins in South Asia (Chesner *et al.*, 1991; Ambrose, 1998; Oppenheimer, 2002, 2003). Possibly, the eruption of the Toba Mount in Sumatra- the largest volcanic blast on Earth in the last two million years, had wrapped India in a 6-inch (15 cm) sheet of volcanic ash leading to a 6-year "Volcanic Winter". So, it was the popular "bottle-neck" argument (Ambrose, 1998) to favour African "exodus" as the Indian archaic hominins were arguably considered possessing primitive technology than the

migrating African humans. But, the Narmada archaeological evidence indicates that the *Homo narmadensis* was quite innovative and culturally adaptive to withstand the “Volcanic Winter”. The innovation of the bone artifacts was a unique cultural adaptation to facilitate rapid attainment of anatomical modernity. The ‘short bodied’ humans also had added advantage of lesser metabolic requirements vis-à-vis the ‘large-bodied’ Acheulian hominins.

While we need to find out more fossil evidences beyond 70 Kya, it is at least clear that the central India was predominated by the “short-bodied” human populations since about 70 Kya. They may have formed the ancestral substratum of the Andaman-Nicobar pygmies, the Proto-Australoid /Austriac Pauri Bhuya/Munda, including the Australian aboriginal populations. The mtDNA M31 signatures of >60 Kya found in the Pauri Bhuya/Munda (Barik *et al.*, 2008; Chandrasekar, 2009) attest the continuity of the “short-bodied” populations inhabiting the easternmost fringe of the Narmada Valley, and it is also an interesting revelation that these signatures are shared with the Andaman pygmy, who appear to have differentiated from the mainland common stock just around 25-30 Kya though their settlement in the Andaman Islands is not yet known archaeologically beyond 2,200 years BP (Cooper, 2002). The antiquity of their collateral groups living in the Phillipines, is however estimated to be 35 Kya (Omoto 1984). According to Bellwood (1978) the Andamanese are the early Austro-Melanesian settlers of Southeast Asia and Oceania, and not closely related to the African pygmy populations.

Modern Andamanese are closer to the Asians than to the Africans. The D-loop and protein-coding data reveal that their phenotypic similarities with the African Pygmies are likely convergent (Endicott *et al.*, 2003, Thangaraj *et al.*, 2002). This view is also supported by genomic studies on the Onge by Thangaraj *et al.* (2005) and on the Jarawa by Barik *et al.* (2008) and by Chandrasekar *et al.* (2009) that they possess haplogroup M31 and M 32 shared with the South-West Asians and Indian mainland Rajbanshi and Pauri Bhuya rather than with the Africans (Figure 5). A great bio-cultural diversity of India is also in itself an indicator of her deep prehistory. The totality of evidences—social, cultural, historical, archaeological, linguistic, phenotypic, epigenetic and genetic—support a conclusion that the Andaman Islanders have been isolated for a substantial period of time from the African groups. It is also clear that South Asia was first inhabited for a long time by diverse short-bodied populations some of which differentiated into the pygmies and the micropygmies, such as the tiny “Hobbits” (*Homo floresiensis*) (Brown *et al.*, 2004) of Indonesia who occupied the Liang

Bua cave in Flores Island close to the Rampasasa Pygmy. The movement continued down to the Near Oceania / Sohul (PNG and Australia). This scenario is unlike the previous view that they bypassed South Asia via southern route to arrive Australia (Lahr and Foley, 1994).

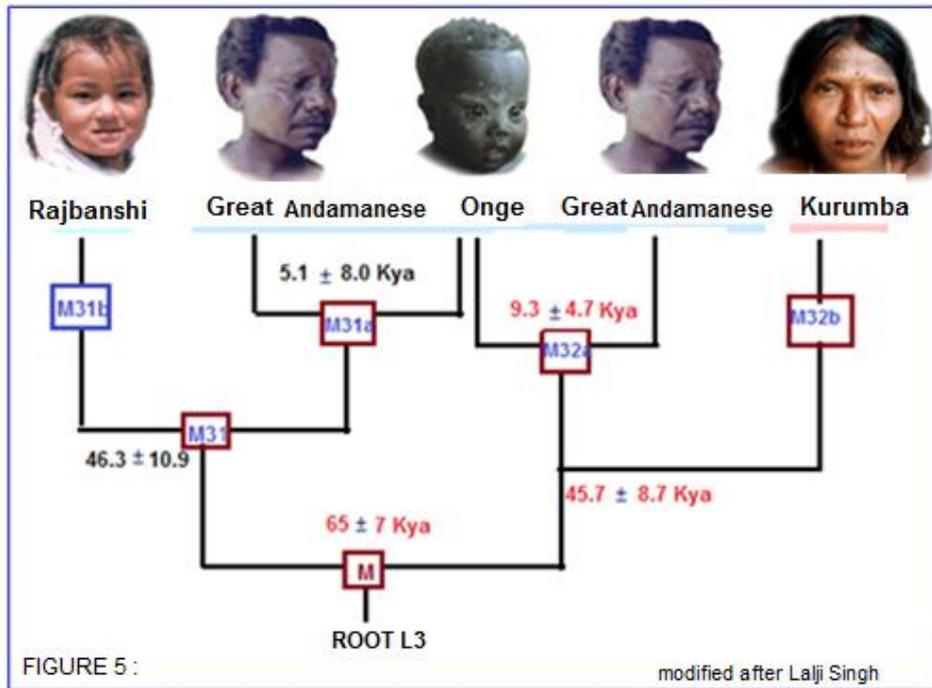


Figure 5: Genomic relationship (in mtDNA M32 haplotype) of the Onge and the Greater Andamanese Pygmy with the mainland Rajbanshi and Kurumba and their divergence times

The contenders of “Out of Africa” hypothesis argue that anatomical modernity in South Asia was due to the migrating ‘large-bodied’ African Upper Palaeolithic *Homo sapiens* as they had attained early symbolism, complex tool-making behavior and sophisticated social behaviour in Africa. This view continued due to lack of fossil evidence in South Asia after the Toba event 75 Kya until very late occupants of the Fa Hien cave of Sri Lanka around 28-30 Kya (Kennedy & Deraniyagala 1989) and Darri-I-Kur of northeastern Afghanistan (Angel 1972). But, India is geographically and climatically very diverse, and we may not rule out the possibility of the late survivors of indigenous late Acheulian ‘large-bodied’ men in South Asia who could achieve anatomical modernity in some pockets. Dambricourt Malassie *vide* Chamyal (2011) cites an example of such survivors as late as about 4500 years ago. She considers that a skull found at Orsang on the western Narmada end in Gujarat in a burial retains vestiges of the ‘robust features’ of *Homo erectus* found in the Hathnora calvarium. If such arguments hold footing, it is quite likely that the descendants of both these ‘large’ and ‘small’ ancient Narmada lineages contributed to the diverse gene pool of South Asia.

The Narmada Pleistocene hominins thus would throw open several possibilities and secrets of human evolution in South and Southeast Asia. It is also because Narmada valley occupies a strategic mid- place in South Asia as well as between Africa/Europe in the west and the South-East Asia in the east, and was the major East-West inter-continental link and passage. The equable climate of Narmada valley, the Central Narmada valley and thousands of prehistoric rock shelters of the Satpura and Vindhyan hills served the ancient abodes and centres of artistic activities down through history. I therefore viewed the region as a “paradise of the Prehistoric man” in South Asia (Sankhyan, 1999a, b, 2005).

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