Early Archaic *Homo sapiens* and their Contemporaries

<table>
<thead>
<tr>
<th>Site Location</th>
<th>Years Ago (approximate)</th>
<th>Cranial Capacity (in cm³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa:</td>
<td></td>
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<tr>
<td>Lake Ndutu (near Olduvai Gorge)</td>
<td>400,000</td>
<td>1100</td>
</tr>
<tr>
<td>Broken Hill (Kabwe), Zambia</td>
<td>130,000+</td>
<td>1285</td>
</tr>
<tr>
<td>China:</td>
<td></td>
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<tr>
<td>Dali, Shaanxi Province</td>
<td>230-180,000</td>
<td>1120-1200</td>
</tr>
<tr>
<td>Jinniushan, Liaoning Province</td>
<td>200,000</td>
<td>1260</td>
</tr>
<tr>
<td>India:</td>
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<td></td>
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<tr>
<td>Narmada Valley, Central India</td>
<td>250,000?</td>
<td>1155-1421</td>
</tr>
<tr>
<td>Europe:</td>
<td></td>
<td></td>
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<tr>
<td>Terra Amata, France</td>
<td>400,000</td>
<td>1150</td>
</tr>
<tr>
<td>Arago Cave, France</td>
<td>400-300,000?</td>
<td>1125-1390</td>
</tr>
<tr>
<td>Bilzingsleben, Germany</td>
<td>425-200,000</td>
<td>1120-1200</td>
</tr>
<tr>
<td>Atapuerca, Spain</td>
<td>320-250,000?</td>
<td>1100</td>
</tr>
<tr>
<td>Petralona Cave, Greece</td>
<td>300-300,000?</td>
<td>1190-1220</td>
</tr>
<tr>
<td>Steinheim, Germany</td>
<td>300-250,000?</td>
<td>1100</td>
</tr>
<tr>
<td>Swanscombe, England</td>
<td>300-250,000?</td>
<td>1325?</td>
</tr>
<tr>
<td>Ehringsdorf, Germany</td>
<td>245-190,000</td>
<td>1450</td>
</tr>
<tr>
<td>Vértesszöllös, Hungary</td>
<td>210-166,000?</td>
<td>1115-1434</td>
</tr>
</tbody>
</table>

Neanderthals 130,000-35,000 (Europe, w. Asia, n. Africa)

*Homo sapiens neanderthalensis/Homo neanderthalensis*

Discoveries:
- 1820's W. Europe
- Engis, Belgium, 1839
- Gibraltar 1848
- Neander River Valley (near Dusseldorf, Germany) 1856
- Darwin’s *Descent of Man* 1871
- Wm. King 1864 “Neanderthal Man”
- Spy, Belgium 1886
- La Chapelle-aux-Saints, sw France
- Marcellin Boule (1911-1913)

Neanderthal Anatomy:
- large bodied, heavily muscled
- relatively short stature
- bipedal, dense bones
- long skulls, low, sloping foreheads,
rel. large brow ridges and noses
lacked chin
large cranial capacity (1300-1750 cc) (Mean = 1520 cc)

mosaic evolution
encephalization

mtDNA
Neander Valley specimen
Caucasus Mt. (29,000 ya)
Portugal (24,500 ya) 1999

Archaic H. sapiens culture

Lower Paleolithic (Oldowan and Acheulian)
Mousterian (Le Moustier) Middle Paleolithic
adaptation to hunting & gathering in sub-Arctic

Levallois technique (percussion flaking)
Levallois flakes (knives, scrapers, spear points etc.)
Use of animal skins as clothing (Stone awls, borers & Le Ferrassie incisors)
habitation sites
Umm el Tiel 50,000 ya Syria

Cannibalism: Mous-Guercy Cave, France (120,000-100,000 ya)

Atapuerca, Spain

ritual burial of dead
Shanidar, Iraq

speech

Cave bear cults: Regourdou
Drachenloch Cave, Switzerland

Divje Babe I site, Slovenia (82,000-43,000 ya) earliest musical instrument?

Fire
Kenya 1.5 mya
Terra Amata, France 400,000 ya
Shelter