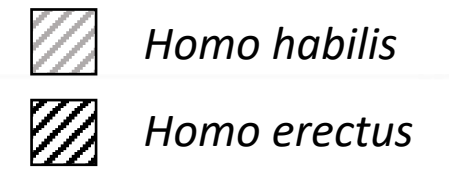


*Homo habilis* & *Homo erectus*: patterns, variation, & geographic distribution



*H. erectus* in Europe

- 1.2-0.4mya
- Smaller teeth
- Wider noses – like later *H. sapiens* there
- Tall & big body – similar to those in Africa

*H. erectus* in Asia

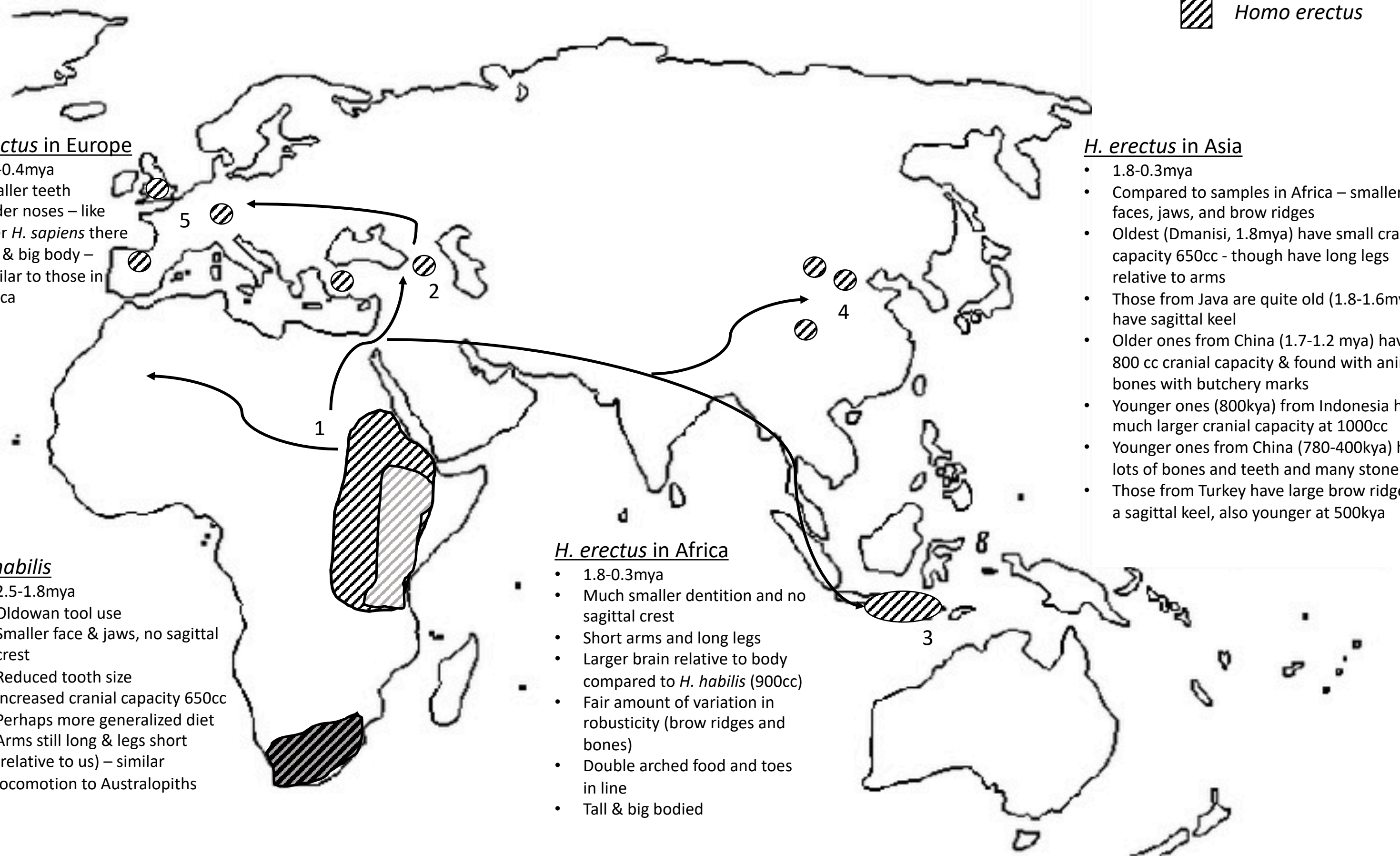
- 1.8-0.3mya
- Compared to samples in Africa – smaller faces, jaws, and brow ridges
- Oldest (Dmanisi, 1.8mya) have small cranial capacity 650cc - though have long legs relative to arms
- Those from Java are quite old (1.8-1.6mya) – have sagittal keel
- Older ones from China (1.7-1.2 mya) have an 800 cc cranial capacity & found with animal bones with butchery marks
- Younger ones (800kya) from Indonesia have much larger cranial capacity at 1000cc
- Younger ones from China (780-400kya) have lots of bones and teeth and many stone tools
- Those from Turkey have large brow ridges and a sagittal keel, also younger at 500kya

*H. habilis*

- 2.5-1.8mya
- Oldowan tool use
- Smaller face & jaws, no sagittal crest
- Reduced tooth size
- Increased cranial capacity 650cc
- Perhaps more generalized diet
- Arms still long & legs short (relative to us) – similar locomotion to Australopiths

*H. erectus* in Africa

- 1.8-0.3mya
- Much smaller dentition and no sagittal crest
- Short arms and long legs
- Larger brain relative to body compared to *H. habilis* (900cc)
- Fair amount of variation in robusticity (brow ridges and bones)
- Double arched foot and toes in line
- Tall & big bodied



Trait	Australopithecines → <i>H. habilis</i>	<i>H. habilis</i> → <i>H. erectus</i>
Teeth	Molars go from very large to more reduced, same with canines	Teeth get smaller still
Face & Jaws	Much more gracile face and jaws – not as much buttressing for large muscle attachments	Face and jaws get smaller as well
Brain	Brain gets bigger, but not a huge amount (400-500cc in Australopiths to about 650 in <i>H. habilis</i> )	Gets larger relative to body size, and get larger over time with <i>H. erectus</i> (650cc with Dmanisi up to ~1000 cc with later specimens from Asia & Africa)
Brow ridge & Sagittal Crest	These more or less do not exist in <i>H. habilis</i> , very gracile face, not much brow ridge at all	No crest, but increased size of brow ridge
Cranial Bone	Similar	Gets thicker
Body size	Very similar	Gets much bigger – especially taller
Arms length	Very similar	Shorter relative to legs
Leg length	Very similar – likely had similar styles of obligate bipedalism and not the long striding we have now	Longer – enabling the efficient striding bipedalism we have today
Diet	Similar, but <i>H. habilis</i> did more scavenging and may have had more plants available	Much more varied and likely had more consistent source of animal protein and potentially cooked plant and animal matter
Culture	Oldowan tool culture	SO MUCH! Acheulean Complex tool culture (hand axe, but good diversity in types and material) that likely enabled <b>hunting</b> , controlled use of fire – these things likely enabled distribution
Geographic Distribution	Africa – same for both	Africa, Asia (China & Indonesia), & Europe