





HOMO HEIDELBERGENSIS— "RHODESIAN MAN"

The skull from the Broken Hill Mine in Kabwe, Zambia, gives us a rare glimpse into the life of an individual hominid. Most fossils give no indication of the cause of death, but from the evidence of his extensive pathologies, paleopathologists (scientists who study ancient disease) believe he died of toxins from his many dental abscesses and the wound above his ear (see page 72). Explanations for this wound range from the spontaneous discharge of an abscess, or an attempt to drain it, to a puncture wound, a bite from a large carnivore, or the postmortem burrowing of beetles. Calvin Wells, a British paleopathologist, wryly warned researchers not to make hasty conclusions. "Even in the fairly straightforward example of the Rhodesian skull widely divergent judgements have been passed....

He is a rash man who is dogmatic about an ancient bone."

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TIMESTONE

Homo heidelbergensis

About 900,000 years ago, the climate cooled and glaciers began to cover much of northern Europe. Sometime after this, hominids called *Homo heidelbergensis* evolved from *Homo ergaster* in Africa. They spread to Europe and then to Asia. They are named for a site near Heidelberg, Germany, where a lower jaw was found in a sand pit. This species has thick cranial bones, a wide face, receding chin, and large curved browridges. They had larger brains and smaller jaws than their predecessors. The postcranial (below the head) bones show the body was more robust than that of modern humans. The name "heidelbergensis" is given to hominids that share features of both earlier *Homo ergaster* and later *Homo sapiens*. Because there is no clear dividing line between species in this evolving lineage, some experts use the name *Homo heidelbergensis* to identify the mid-range of the transition; others call these hominids "archaic *Homo sapiens*," "late *Homo ergaster*," or simply "transitional."

Evidence for big game hunting is abundant for this species. On the Isle of Jersey (off the northwest coast of France), numerous mammoth and woolly rhinoceros bones have been found at the base of a cliff, indicating the animals were stampeded over the edge. Many of the bones have stone tool marks, and some had been segregated into piles of limb bones and piles of skulls. In a coal mine in Germany, an unusual find of three wooden spears indicated these hominids were using spears for hunting. Bones of hundreds of horses, many with stone tool marks, were also found in the site.



Cast of fossil skull
Homo heidelbergensis—
Steinheim Woman
Found in Steinheim an der Murr,
Germany, in 1933 by Karl Sigmund, Jr.
Age: 250,000 years

About 300,000 years ago, *Homo heidelbergensis* developed a new stone working technique called the Levallois in which a large, sharp flake is removed from a prepared core. We have an image of this hominid: large, strong, with excellent hunting skills, and the cognitive ability to plan and execute a successful hunt.

Homo heidelbergensis had a cranial capacity (indicating brain size) that was about 30% larger than that of *Homo erectus*. The browridges showed a transition from straight to arched. The face was broad and flat and the teeth were smaller. In what is now Europe, Neandertals descended from *Homo heidelbergensis*, while in Africa *Homo sapiens* evolved from *Homo heidelbergensis*.



Cast of fossil skull
Homo heidelbergensis—**Rhodesian Man**
Found in Kabwe, Zambia,
in 1921 by Tom Zwigelaar
Age: 250,000 - 130,000 years

LEVALLOIS TOOLS

300,000 to 250,000 years ago

These stone tools have been found in Africa and Europe. The toolmaker struck a flake of predetermined size and shape from a prepared core, then shaped the flake into a tool with a fine cutting edge. Making these tools required several coordinated steps, suggesting an increase in hominid cognitive abilities. This technique was invented before the Neandertals, but they refined it to make specialized tools for cutting meat, scraping hides, and working wood and bone.



Debitage
(waste flakes from making this tool)



Prepared core



Core without flake



Levallois flake

Replicas of Levallois stone tools
Found in Africa and Europe
Age: 300,000 to 250,000 years
Replicas by Bernard Ginelli