Case 1-Paleo-Clactonian-England-Swanscombe-400,000 BP

**Clactonian Flint Tools, Northfleet, England, 400,000 BP**

These Clactonian flint tools were made by *Homo erectus* in the early Hoxnian Interglacial, ca 400,000 BP (Marine Isotope Stage 11, 424,000-374,000 BP (Lisiecki and Raymo 2005; Stringer 2006) and may have been used for hunting Pleistocene animals including the straight-tusked elephant *(Palaeoloxodon antiquus*) (Glass 2016) and the giant hippopotamus, (Hippopotamus amphibius) (Schreve 2009**;** Tester 1984). Clactonian refers to the flint tools found in a paleo-channel at Clacton-on-Sea in Essex, England, in 1911 (Warren 1922). The present tools above were found in Northfleet, near the destroyed flint quarries of Barnfield Pit and Rickson's Pit, Swanscombe, Kent County, England, previously noted for their Clactonian artifacts (Darvill, 30 Jan 2017; Tester 1984). Clactonian tools evolved from Olduwan tools that are associated with *Australopithecus afarensis* (“Lucy”), but unlike Olduwan tools, some Clactonian tools are side-notched, like the side-scraper (above) indicating they were hafted to a handle or shaft. Retouch on Clactonian tools is uncommon, but the side-scraper (above) exhibits retouching both to make it sharper and to make it possible to haft it to a handle with two larger, opposing side-notch flakes. The prominent bulb of percussion on the flakes indicates use of a hammerstone for more controlled and regulated shapes than was possible with the Olduwan technology.

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