

## Neanderthals distinct species from modern humans, new research claims

In an extensive, multi-institution study led by SUNY Downstate Medical Center, researchers have identified new evidence supporting the growing belief that Neanderthals were a distinct species separate from modern humans (*Homo sapiens*), and not a subspecies of modern humans.

The study looked at the entire nasal complex of Neanderthals and involved researchers with diverse academic backgrounds. Supported by funding from the National Science Foundation and the National Institutes of Health, the research also indicates that the Neanderthal nasal complex was not adaptively inferior to that of [modern humans](#), and that the Neanderthals' extinction was likely due to competition from modern humans and not an inability of the Neanderthal nose to process a colder and drier climate.

Samuel Márquez, PhD, associate professor and co-discipline director of gross anatomy in SUNY Downstate's Department of Cell Biology, and his team of specialists published their findings on the Neanderthal nasal complex in the November issue of *The Anatomical Record*, which is part of a special issue on The Vertebrate Nose: Evolution, Structure, and Function (now online).

They argue that studies of the Neanderthal nose, which have spanned over a century and a half, have been approaching this anatomical enigma from the wrong perspective. Previous work has compared Neanderthal nasal dimensions to modern human populations such as the Inuit and modern Europeans, whose nasal complexes are adapted to cold and temperate climates.

However, the current study joins a growing body of evidence that the upper respiratory tracts of this extinct group functioned via a different set of rules as a result of a separate evolutionary history and overall cranial bauplan (bodyplan), resulting in a mosaic of features not found among any population of *Homo sapiens*. Thus Dr. Márquez and his team of paleoanthropologists, comparative anatomists, and an otolaryngologist have contributed to the understanding of two of the most controversial topics in paleoanthropology – were Neanderthals a different species from modern humans and which aspects of their cranial morphology evolved as adaptations to cold stress.

**Read full original article:** [Were Neanderthals a sub-species of modern humans? New research says no](#)