

Bergman and allen's rule

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Carl Bergman, a 19th century German biologist, stated that in a warm-blooded, polytypic, wide-ranging animal species, the body size of the members of each geographic group varies with the average environmental temperature.

According to this principle, warm-blooded animals living in cold climates would tend to gradually become larger than animals of the same species living in warmer climates.

J. A. Allen however said that animals adapted to cold have shorter limbs and protruding body parts.

Taking these two rules together we could expect those living in cold, Northern climates to have short limbs, protruding body parts and be larger than those living in warmer places.

It is believed that homo neanderthalis came North out of Africa 600, 000 years ago. After that period there was an increase in their cranial capacity. They populated Europe from about 130, 000 until 28, 000 years ago when they either became extinct, or were so absorbed by homo sapiens as to become invisible.

Fossil finds, associated with various cold adapted creatures such as reindeer. They had brow and jaw ridges and protruding faces. Palmer tuberosities and tools found show that they probably had twice the strength of modern man. According to muscle attachment points and bone thicknesses it seems that they were more robust than modern man, but also that they were more sedentary.

Homo sapiens ranged far and wide, whereas Neanderthals tended to stay in northern climes. Body mass increased in time, until they were about 30% larger than the worldwide average according to John Kappelman.

McDonald makes the point that they lacked the culture to protect themselves from the elements and so adapted genetically with short, massively strong limbs, thick torso, prominent central face etc. Limb proportions are close to those of modern day extreme northern peoples such as the Inuit or Lapps. This fits in with the rules quoted earlier.

References

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