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Did invading farmers drive pygmy diversity?

11:22 06 February 2009 by [Ewen Callaway](#)
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West African pygmy populations vary more than their similarities in body size would indicate.

A new genetic analysis of pygmy populations native to Gabon and Cameroon suggests they split apart from one another roughly 3000 years ago and from other humans at least 50,000 years ago.

European explorers first encountered pygmy populations in the 19th century and lumped them together under a name that Homer used in the *Illiad* to describe an African tribe of diminutive crane-fighters.

"Artificially we created a common origin and a common heritage just by the use of this pygmy term," says Paul Verdu, a geneticist at the [Musée de l'Homme](#) in Paris, who led the study

No group identity

Although pygmies resemble one another in physical stature – about 1.5 metres on average – they share little else in common. Some live as jungle hunter-gatherers, while others practice agriculture and commerce and live in the savannah.

Many of their languages are also very varied, and the populations do not view identify any of the others as an ancestral group. "There is no such thing as a pygmy civilisation or identity," Verdu says.

Working with ethnographers, anthropologists and musicologists, his team collected DNA from 604 people belonging to nine pygmy groups and 12 non-pygmy populations living nearby.

Their analysis of 28 DNA markers hinted at close relations among the non-pygmies, but more widespread genetic diversity among pygmies. A mathematical analysis of the data suggested that the pygmy populations diverged from one another roughly 2,800 years ago.

What's more, all the pygmy populations showed signs of inbreeding with outsiders. None of the non-pygmy populations, however, exhibited any evidence of pygmy genes.

'Second-class citizens'

This apparent paradox might be explained by widespread discrimination against pygmies, Verdu says. Occasionally, pygmy women marry into non-pygmy families and have children. Often these women and children are treated as second-class citizens and they eventually return to their native lands.

Exactly why pygmy populations diverged from one another is unclear, Verdu says. He hypothesises that an ancient migration of farmers and herdsman across sub-Saharan Africa – dubbed the Bantu expansion – might have segmented pygmies living in West Africa.

"That makes sense to me," says [Sarah Tishkoff](#), a geneticist at the University of Pennsylvania in Philadelphia, who was not involved in the study.

"You've got these Bantu people coming through and maybe that caused isolation among these hunter gatherers who would have otherwise roamed freely."

A bigger mystery for Tishkoff is the relationship between West African pygmies and East African pygmies, who live thousands of kilometres away.

Journal reference: [Current Biology](#) (DOI: 10.1016/j.cub.20812.049)

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Two subsistence hunters from the BaAka pygmy tribe hunt game along a forest stream (Image: Martin Harvey/CORBIS)

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Makes Sense

Fri Feb 06 12:21:52 GMT 2009 by **Nat Tate**

Non-pygmy genes enter the pygmy gene pool because pygmy females interbreed with taller non-pygmy men. Pygmy males and non-pygmy females don't interbreed presumably because such females think shorter men are inferior sexually, as happens in the West. Females probably think there is a relation between height and penile length

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Classic

Fri Feb 06 15:57:26 GMT 2009 by **Chris**

Penile length? That and the ability to hunt, rise up the social ranks, protect offspring...

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Pygmies

Fri Feb 06 15:58:59 GMT 2009 by **john**

Pygmies are simply humans with a genetic predisposition towards a short stature. They are not different from us in any other way, any more than most of our Europeans ancestors were a few hundred years ago - who a lot shorter than they are today. In other parts of the world I have witnessed local populations are also very short. In Africa it is well known that there are some regional differences in stature. In a few areas there are people who are much taller than the average European or American for no apparent reason. Responses to the availability of nutrients can be a factor but this explanation has its limitations. It may be simply the whims of genetic variance and dominant vs recessive genes.

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