

Re: A new topic.

Source: <http://sci.tech-archive.net/Archive/sci.bio.evolution/2004-12/0209.html>

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Date: 12/19/04

Date: Sun, 19 Dec 2004 05:37:04 +0000 (UTC)

innominatetwice@yahoo.com wrote in news:cpscqq\$13d\$1@darwin.ediacara.org:

- > *I asked a question about recessive genes. The answers that I got*
- > *totally disabused me of the understanding I previously had about this*
- > *subject.*
- >
- > *I actually thought that "recessive" genes were the genes that "lost*
- > *out" in some kind of cellular competition between chromosomes.*
- >
- > *For instance recently, from the television, I heard that "blue*
- > *eyes" are the product of "recessive genes". To be honest, in the*
- > *context of what I've been told here, I don't really understand*
- > *that.*
- >
- > *I had thought that, in a given individual with the genetic*
- > *determination to have "blue eyes", that they would have "blue*
- > *eyes" unless they also had some (less recessive) genetic admixture*
- > *which would overrule that result and produce another.*

Genetics is nothing like as simple as the simplified models presented in high school and on TV, but to vastly oversimplify the genetics of eye color:

Blue eyes result from a lack of pigment

Brown eyes result from the presence of pigment

If an individual has even one copy of the "brown eye" gene, then pigment is produced and the individual has brown eyes. Two brown eye genes will obviously still give brown eyes. It is only if both copies of the eye color gene are for blue eyes that the individual will have blue eyes. But note that this only works when the difference is between producing or not producing a pigment.

- > *Okay, I have a new question: When a Black person and a White person*
- > *have a child, why is it that (in my opinion) the characteristics of the*
- > *child appear as an "averaging" of the parents traits? For instance,*
- > *their skin color, body shape and so on.*

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sci.bio.evolution: Re: A new topic.

In this case there are a number of genes involved for each trait. In the case of skin color, they regulate the amount of pigment produced, not simply the presence or absence of pigment, and the genes interact to determine the total amount of pigment produced. So you don't have a simple on/off switch, you have a volume control – the more of one type of gene, the darker the skin.

> *What I want to know is: how is it possible for the two sets of genes to
> work together and yet interfere with each others results? And to do so
> in a way that seems predictable and regulated.*

The genes have gotten used to working together over millions of years of evolution. Blacks and Whites (by the way, skin color by itself is not a very accurate way of separating humans into genetically similar groups) are both of the same species and have interbred frequently throughout the course of evolution, so those genes that did not "play well together" did not survive.

Yours,

Bill Morse