

# No, Redheads Are Not In Danger Of Going Extinct

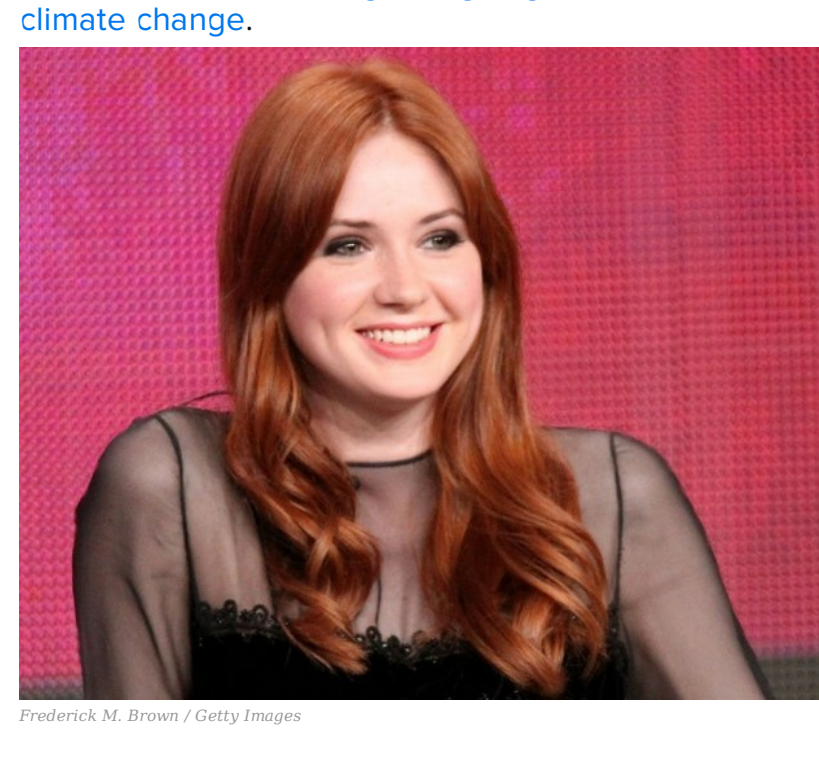
Ginger people, rejoice. You'll be around for a long time to come.

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**Tom Phillips**  
BuzzFeed Staff



According to the news over the past few days, people with red hair are **in danger** of **going extinct** due to **climate change**.



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To illustrate this, here is a picture of a redheaded person chosen *completely at random*.

The idea is that as the climate in northern Europe gets warmer, redheads will gradually die out as their paler skin – adapted to cloudy conditions – proves unable to cope with the massive amounts of sun that Scotland will suddenly have.



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Of course, this is nonsense. Ginger people are not going to be killed off in droves by it becoming a little bit sunnier, [as is helpfully explained here](#).

In fact the "ginger people might die out" story [has gone around the internet several times before](#), and has never been any true. It's normally a PR stunt by genetics testing companies.

But even if redheads were fatally allergic to sunlight, they still wouldn't go extinct. Why? Because of how genetics works.



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Most red hair in northern European populations is caused by one of several different variants of a gene called **M<sup>C1R</sup>**, with those variants particularly common in Celtic countries like Scotland and Ireland. And all the red-hair variants of M<sup>C1R</sup> are recessive.

Being recessive means that you need to get a redhead copy of the gene from both your mother *and* your father to have red hair.

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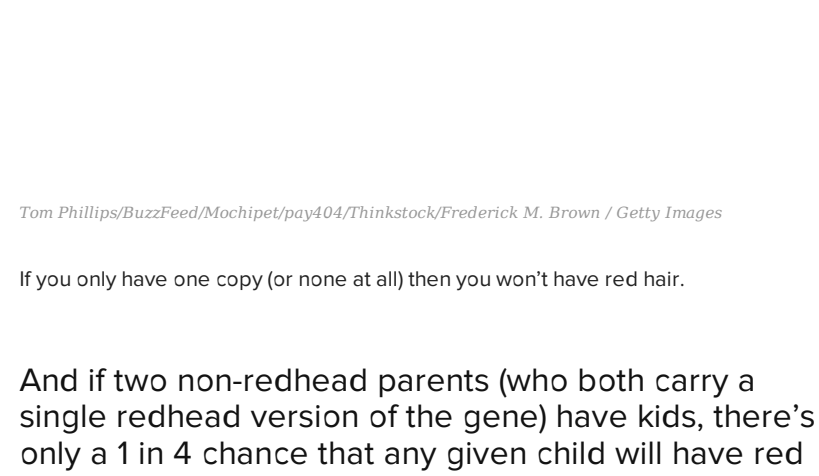
If you only have one copy (or none at all) then you won't have red hair.

And if two non-redhead parents (who both carry a single redhead version of the gene) have kids, there's only a 1 in 4 chance that any given child will have red hair.

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But, crucially, there's a 1 in 2 chance that a child will also be a secret, non-redheaded carrier of the ginger gene.

If a gene's effects mean you're less likely to survive and pass on your genes to your children, it will naturally become less common in the gene pool.



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That's the theory of natural selection in a nutshell.

But with a recessive gene, even if the people who have two copies of it die off and get replaced in the population, there's still plenty of people who carry a single copy of the gene but don't suffer any ill effects.

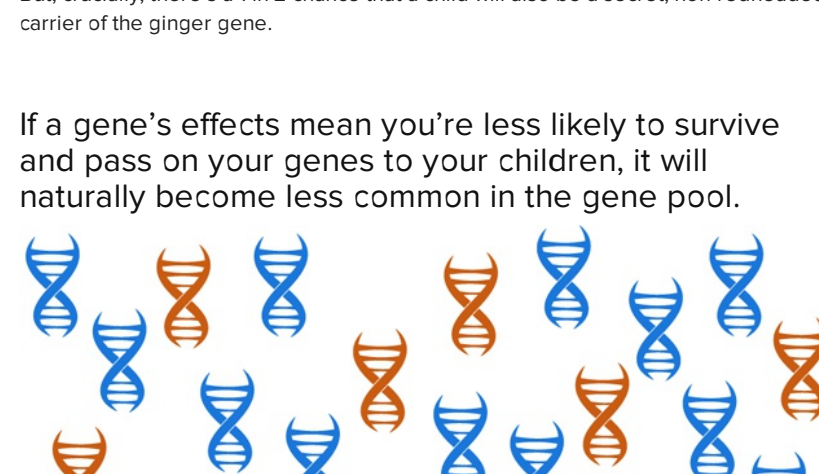


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And as it gets rarer, the chances of two single-copy carriers hooking up (and producing that 1 in 4 chance redheaded child) also goes down.

But they can still pass on single copies of the redhead variant gene to non-ginger children, sometimes skipping many generations.

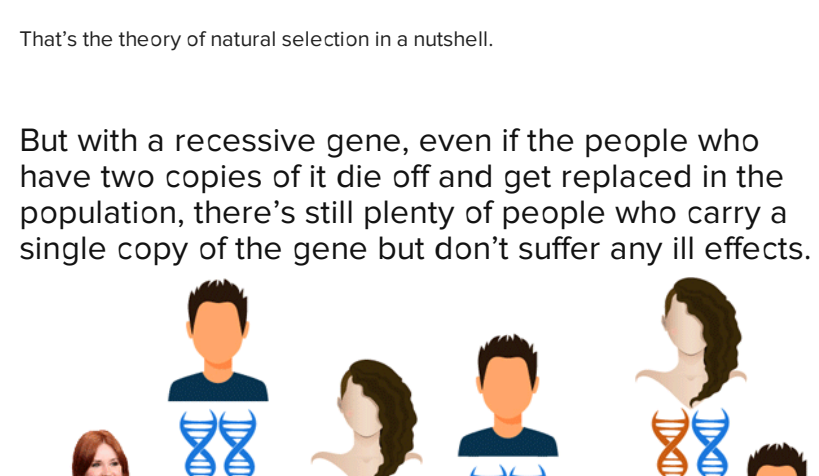
This means that even if a recessive gene is actually *deadly* (which red hair definitely isn't), it's still almost impossible to completely breed it out of a population.



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The rarer a recessive gene gets, the harder it becomes for natural selection to get rid of the remaining copies of it. (This is why serious recessive diseases, such as cystic fibrosis, still exist.) For something like red hair, which really doesn't change your likelihood of death much, it won't even come close.

And despite its rareness, you'll still get occasions when two carriers meet and produce a kid with both copies of the gene.




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These magical ginger children will then go on to reproduce a huge amount, thanks to the fact that redheads will be rare, almost mythical creatures of astonishing beauty and jaw-dropping hotness.

Tagged: science, genetics, ginger pride, population genetics, redheads

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