

CRISPR may allow us to choose the color of butterfly wings

Only nature can paint the gorgeous colors and patterns on a butterfly's wings. But scientists said... they have mastered the first steps and hope in time to control the entire coloring system, making it possible to design living butterfly wings. The patterning and colors on butterflies' wings are governed by suites of genes. The new Crispr-Cas gene-editing technique now makes it much easier to figure out what a gene does by deleting it and seeing what happens.

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A group led by Linlin Zhang and Robert D. Reed of Cornell University has found that a gene called optix has a remarkable role: It controls all the color in a butterfly's wing. When optix is deleted from the Gulf fritillary's eggs, the resulting adult butterflies, which are mostly deep brown, wear a ghostly black and silver livery.

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[S]pecies evolve [in] different forms. The work of these two groups shows that genes like WntA and optix — master genes that control the activity of other genes — can evolve very different roles in different species.

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"A big question in evolutionary biology is how do you rewire these gene networks," Dr. Reed said.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Genes Color a Butterfly's Wings. Now Scientists Want to Do It Themselves](#)