

Study looks at fruit fly sexual attraction

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U.S. scientists with the Howard Hughes Medical Institute say in the frantic world of the fruit fly, courtship may depend on having the right wing spots.

The researchers have reportedly determined which elements of fly DNA make the spots appear and disappear in different species.

The experiments are among the first to identify "the deep mechanics of evolution" that underpin complex traits, said the study's senior author Sean Carroll, a Howard Hughes researcher at the University of Wisconsin-Madison.

The scientists say their findings emphasize the evolutionary significance of "pleiotropic" genes -- those with multiple on-switches that enable the expression of a single gene in different tissues or at different stages of development.

"The wing spot on the fruit fly is a particularly good model because we know it constitutes a new feature that is gained or lost by evolution in different species," said Carroll. "And, since it is a spatial pattern, it gives us a chance to analyze the evolution of a physical trait."

Carroll's team collaborated with researchers from the University of Cambridge and Stony Brook University.

The study appears in the current issue of the journal Nature.

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