

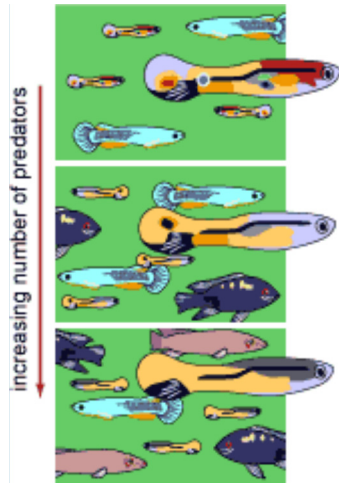


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Experiments



Experiments also show that populations can evolve.

John Endler of the University of California has conducted experiments with the guppies of Trinidad that clearly show selection at work. The scenario: Female guppies prefer colorful males for mating purposes. Predatory fish also "prefer" colorful males, but for a less complimentary purpose — a source of food that is easy to spot. Some portions of the streams where guppies live have fewer predators than others and in these locations the males are more colorful (top frame). Not surprisingly, males in locations where there are more predators tend to be less colorful (bottom frame).

When Dr. Endler transferred predatory fish to the regions with brightly colored male guppies, selection acted rapidly to produce a population of duller males. This demonstrates that persistent variation within a population provides the raw material for rapid evolution when environmental conditions change.

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Take a sidetrip

Read more about John Endler's experiment with [artificial selection in the lab](#).

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