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Darwin was right — again

By Robert C. Cowen, [The Christian Science Monitor](#)

Critics of evolution cite scientific debates to undercut Darwin's credibility. That strategy fails when research clears up some of the issues. Results from two separate research projects announced this week make that point.

They deal with Darwin's controversial suggestion that new species can arise within an ancestral population even when there is no way to separate the diverging groups geographically.

There's plenty of evidence that new species arise when segments of a single population become geographically separated, as Darwin also theorized. His other suggestion has lacked such evidence. It has remained what Axel Meyer and his colleagues at the University of Konstanz in Germany call "one of the most controversial concepts in evolutionary biology."

They present in the journal *Nature* what they consider "a convincing case" that Darwin was right.

They found their proof in Nicaragua's isolated volcanic crater Lake Apoyo. There, two species of cichlid fish — Midas cichlid and Arrow cichlid — live together. Detailed genetic, morphological, and ecological study confirms their relationship as separate species that evolved from a common ancestor. They live separate lives in the same geographical space. Misas feeds along the bottom. Arrow exploits the open water. The two do not interbreed.

The researchers explain why they are convinced that the two species did not evolve elsewhere and then invaded the lake after it formed about 23,000 years ago. Once the ancestral population was established, however, evolution progressed rapidly.

The team estimates that the new species appeared in less than 10,000 years — a blink of the eye in geological time.

Vincent Stivolainen at Britain's Royal Botanic Gardens in Kew and nine fellow scientists find what they call "clear support" for Darwin's idea in palm trees on Lord Howe Island 600 miles east of Australia.

Two species of the trees live side by side. The scientists find it "highly unlikely" that they evolved while geographically separated. There is strong reason to conclude that they evolved from a common ancestor without geographical separation.

The two species appear to have gone separate ways because they flower at different times. This may originally have been due to differences in local soil conditions. In their report on *Nature's* online publication site, the researchers say the flowering times of the two species correlate with their soil preferences.

In the case of Lake Apoyo, the differences in the feeding habits of the fish may have provided the opportunity for those two species to diverge.

There's a larger lesson in this scientific nitty-gritty. It's taken more than a century and a half to resolve what, for scientists, was an important controversy. Patient research finally paid off.


Proponents of creationism theories plead that high school science classes should "teach the controversy." They have a point, although it is not the point they think they are making. There is no "evolution vs. creationist" scientific controversy. It's a political and philosophical controversy. Yet evolutionary biology has plenty of genuine scientific controversy.

If schools taught that kind of controversy and how patient research can eventually resolve it, classroom science would be enriched.

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