

Weeds that reinvented weediness

September 3 2009

Flowering plants are all around us and are phenomenally successful—but how did they get to be so successful and where did they come from? This question bothered Darwin and others and a paper published in the September issue of the *Botanical Journal of the Linnean Society* indicates that their ability to adapt anatomically may be the answer.

Sherwin Carlquist, a research botanist at the Santa Barbara Botanic Garden and recipient of the Linnean Medal for Botany, has spent his career studying "non-tree" flowering plants to discover more about their origins and the reason behind their success. "[Fossil evidence](#) had provided some answers and [DNA evidence](#) had shown us how earlier flowering plants were related, but how they looked, and what their wood was like, were neglected topics" says Dr Carlquist.

In-depth studies of the growth form and anatomy of wood cells produced unexpected results, indicating that flowering plants originated not as trees (as thought throughout most of the 20th century), but as relatively non-woody "pre-trees" that could outcompete ancient plants like conifers. Rather than simulating conifers, flowering plants developed new mechanisms for survival which gave them a competitive advantage.

"Flowering plants are the new [weeds](#), able to keep reinventing new forms and wood patterns. They stayed non-woody at first, perfecting new conducting systems that have more design flexibility and can do what conifer woods can't. Flowering plants still do this today, inventing amazing new forms and wood formulas, using juvenile tendencies they retain. They are the "new kids on the block," the weedy newcomers that

change and adapt rapidly" says Dr Carlquist.

Source: Wiley ([news](#) : [web](#))

Citation: Weeds that reinvented weediness (2009, September 3) retrieved 6 May 2024 from <https://phys.org/news/2009-09-weeds-reinvented-weediness.html>

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