

Withering well can improve fertility

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Contrary to a thousand face cream adverts, the secret of fertility might not be eternal youth. Research by the ecologist Dr. Carlos Herrera, a Professor of Research at the Consejo Superior de Investigaciones Científicas in Seville, Spain has shown that the withering action of flowers may have evolved to protect their seeds. His research is published in the October 2010 issue of the *Annals of Botany*.

Prof. Herrera said: "No one has paid much attention to the corollas, collections of [petals](#) on a flower, when they shrivel. Their job is done, so it's no surprise they die. But if their job is done, why don't the petals simply drop off the plant? I thought there might be an advantage that kept the old corollas on the plant."

To test his idea, Herrera conducted a very simple experiment. He removed dead petals from some lavender. Then he observed what happened to the seeds.

Prof. Herrera said: "The results for the lavender were striking. Normally you'd expect around 60% of the lavender fruits to ripen. Without the withered petals around the fruit, only 40% ripened. The dead petals seem to have formed a protective barrier around the fruit. In this case the barrier helps prevent attack by gnat larvae who like to feed on lavender seeds."

He also tried the same experiment with some violas, but got a different result.

"For violas I found that the petals helped increase the number of [seeds](#) per fruit, but had no effect on ripening. It's clear that the petals are doing something important for the plant after they decay, but it is a complex relationship that needs more study. Still, it shows there is a major role for petals to play on a plant, even after the bloom of youth has gone."

More information: Prof. Herrera's research is published as "The results are published as "Marcescent corollas as functional structures: effects on the fecundity of two insect-pollinated plants" in the Annals of Botany. [doi:10.1093/aob/mcq160](https://doi.org/10.1093/aob/mcq160) which will be online from the 24th of September 2010.

Provided by Oxford University

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