# Attacked, tobacco plants call their enemy's enemy

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Courtesy of Science
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**When caterpillars nibble on wild tobacco plants, the leafy victims emit a distress signal that brings the vermins' enemy flying in to the rescue, a new study has found.**

Caterpillar eggs, a young caterpillar and a predatory bug that has just arrived, all are on the bottom of this tobacco leaf. (Credit: Max Planck Institute for Chemical Ecology/Danny Kessler)

**Damaged plants promptly give off chemicals known as green leaf volatiles, or GLVs. If you've smelled freshly cut grass, you've smelled GLVs.**

**Researchers found that these GLVs can send a specific signal, at least in the case of the wild tobacco plant, Nicotiana attenuata.**

**When the plant is attacked by tobacco hornworm caterpillars, *Manduca sexta*, the caterpillars' saliva causes a change in the GLVs that the plants produce.**

**This modified cocktail attracts predatory insects called Geocoris, which prey on hornworm eggs and young larvae, thus protecting the plant.**

**More research will be needed to figure out exactly how the molecules in the caterpillar saliva cause this change in the GLVs, the researchers say.**

**The study, published in the Aug. 27 issue of the research journal *Science*, was conducted by Silke Allmann of the Swammerdam Institute for Life Sciences in Amsterdam, the Netherlands and the Max Planck Institute for Chemical Ecology in Jena, Germany and Ian Baldwin of the Max Planck Institute for Chemical Ecology in Jena.**