

Contaminated nectar may change behavior of pest-controlling insects

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MARIJKE LENAERTS

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By Amy McDermott | 9 December 2015 1:45 pm | Comments

When insects visit flowers to lap up a meal, they contaminate the nectar with bacteria and yeast. Those microbes then gobble sugars and amino acids or convert them into other compounds, which could change the nectar's appeal for pest-controlling bugs, according to a study in *Basic and Applied Ecology*. Researchers grew three flower species—borage (pictured above), common comfrey, and cornflower—that farmers use to attract predatory and parasitic insects, including wasps, flies, lady beetles, and lacewings. They covered some of the plants with bags and allowed others to bloom freely. The scientists counted the insect species visiting the flowers, then used genetic analysis to identify the microorganisms deposited. They found that open flowers had nectar full of microbes, and the sugars glucose and fructose. In nectar from the pristine bagged flowers, sucrose was much more common, and total sugar concentration was higher. [Amino acids also varied, changing the nectar's taste.](#) Insects deal with this contamination in a wide range of ways, often with species-specific responses to microorganisms and plants: Honey bees avoid flowers spiked with specific bacteria, whereas some wasps feed on orchid nectar fermented by bacteria and fungi. Farmers and horticulturalists should consider these tight relationships to maximize the benefits of insect-attracting plants, the researchers say.

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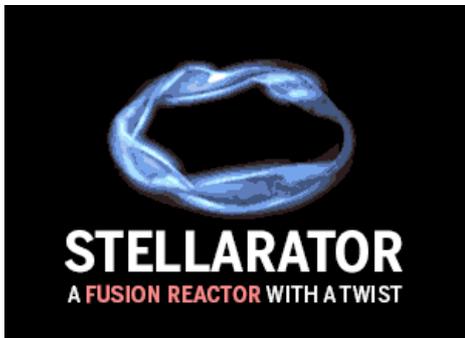
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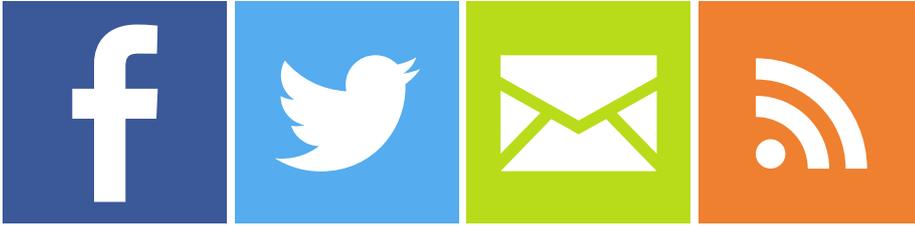


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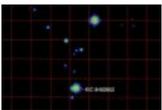
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