

Credit: Steve Marshall

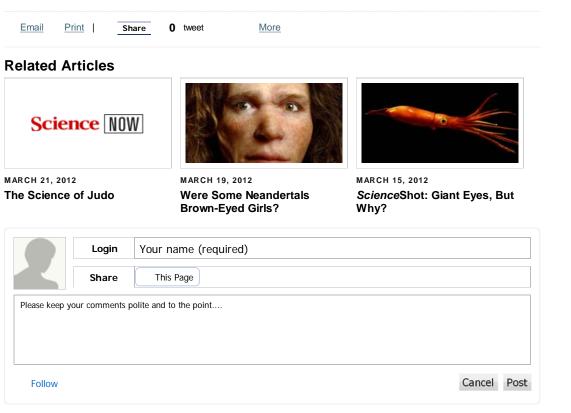
The fly on the left is a puzzle. In theory, it should have evolved to look just as wasplike as the one on the right, the better to ward off hungry birds. But many members of the family Syrphidae, to which both flies belong, only vaguely resemble stinging insects. Scientists have suggested that these <u>mimics are imprecise because they</u> <u>simultaneously copy multiple species</u>, or that humans see imperfections invisible to birds. To test these and other explanations, researchers examined 38 species of hover flies (Syrphidae) and 10 species of bees and wasps. After a statistical analysis of the insects' body measurements and colors, as well as their abundance and ability to trick both humans and birds, the authors discarded most of the existing explanations. Instead, they report online today in *Nature*, the answer comes down to size: Big flies were the best mimics and small, housefly-sized ones the worst. The team suggests that, because birds prefer to eat larger flies, the little ones simply aren't under as much pressure to evolve perfect disguises.

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