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ECOLOGY

Like a moth to a trumpet flower

Nature 520, 411 (23 April 2015) | doi:10.1038/520411b
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Subject terms: Ecology · Animal behaviour

Hawk-moths are better at finding nectar in flowers shaped like the bell of a trumpet than in those that resemble a flat disc.



Eric Octavio Campos and his colleagues at the University of Washington in Seattle used a 3D printer to create flowers that were either flat or curved like a trumpet. The team inserted a tube filled with sugar water into the centre of each flower, and allowed hawk-moths (*Manduca sexta*; pictured) to feed from them. Although the moths visited each type of flower equally, they drained trumpet flowers more often than flat ones. The results suggest that the trumpet shape helps to guide the moth's probing mouthparts to nectar.

Before the advent of 3D printers, ecologists who studied plant–pollinator interactions had to breed flowers or sculpt fake ones by hand. The 3D-printing technology allowed Campos's team to quantify flower shape and produce precise models with ease.

Funct. Ecol. 29, 462–468 (2015)

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