Current Biology, Volume *20*

Supplemental Information

Changing Pollinators

as a Means of Escaping Herbivores

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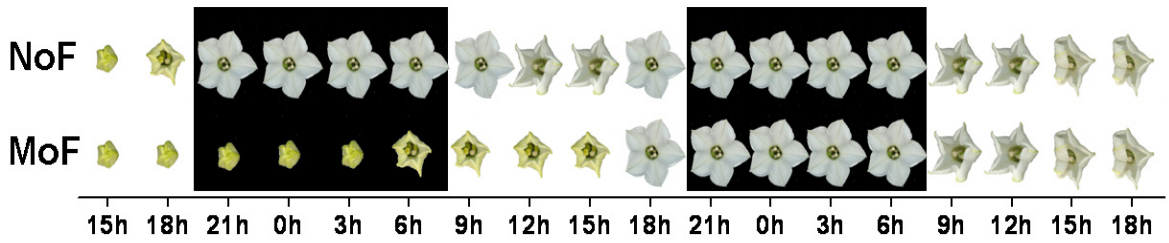

Figure S1. Phenology of Corolla Presentation of Night-Opening Flowers and Morning-Opening Flowers, Related to Figure 1

NoF open between 4 pm and 10 pm while MoF open circa 12 hr later between 6 am and 10 am. While NoF completely expand the outer lips of their corollas in less than 1 hr after opening at dusk, MoF remain in an intermediate open stage and don't fully expand their corollas until the next night, 12 hr after opening. The average corolla longevity in self-pollinated MoF is 38±10 hr (mean ± SD) compared to 50±9 hr in NoF (Student's t test, $t_{25} = -3.12$, $p = 0.0045$).

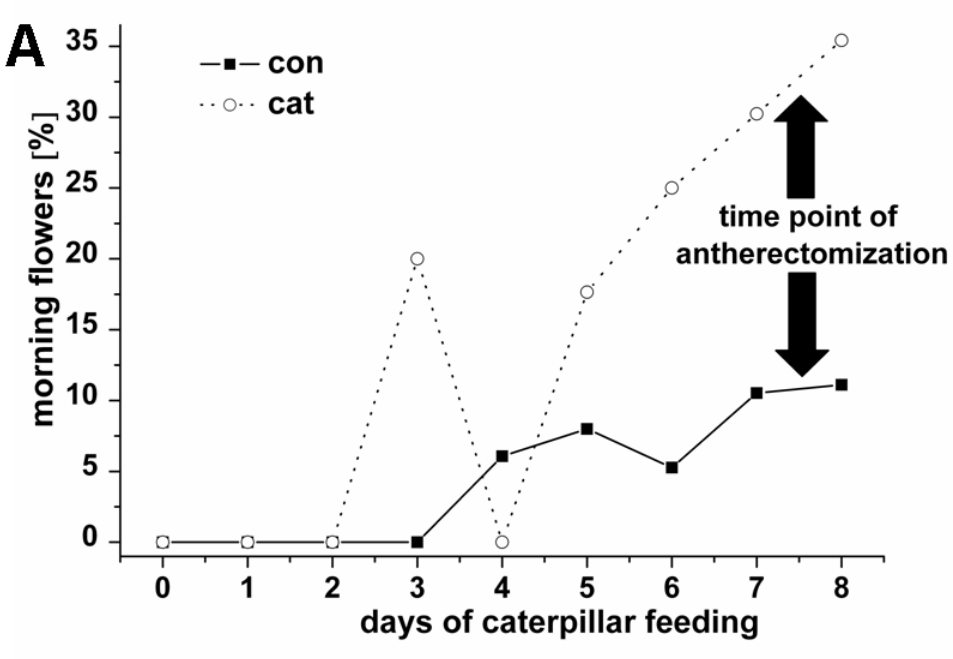

Figure S2. Subset of Data, Shown in Figure 1A, Used to Measure Rates of Capsule Production (Figure 3A) in Unattacked (con) and *M. sexta* Larva-Attacked (cat) Plants, Related to Figure 3

(A) Seven days of continuous *M. sexta* caterpillar feeding increased the production of morning-opening flowers. On the morning of day 7, all flowers on control as well as *M. sexta* attacked plants were antherectomized and used in the pollination experiment.

(B) Mesh (Breather plant bags; Kleen Test Products, Brown Deer, WI, USA) -covered wire cones used to cover plants at times when pollinators were not allowed to visit flowers.

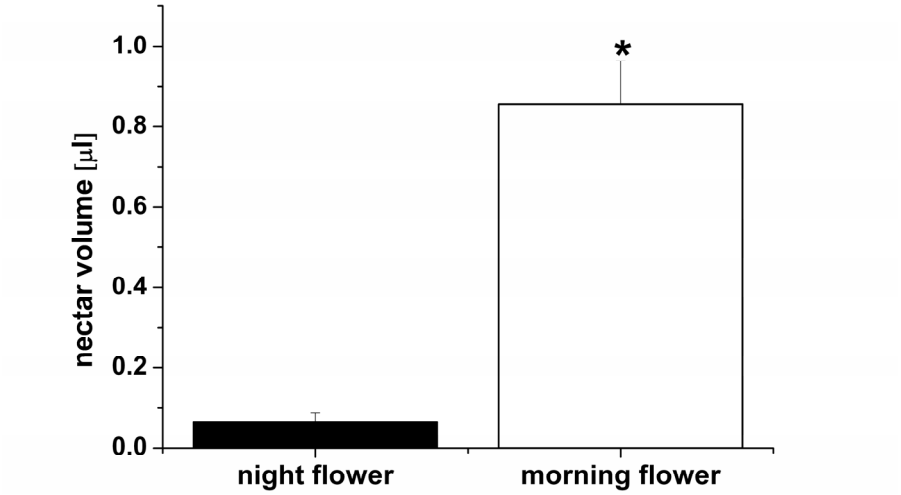

Figure S3. Influence of Nectar-Robbing Carpenter Bees Differs between Night- and Morning-Opening Flowers

Mean ± SE nectar accumulation in *N. attenuata* night- and morning-opening flowers after exposure to carpenter bees that robbed nectar mostly from the night-open flowers. Nectar volume was measured between 8:30 and 9:30 am in a native population (paired Student's t test, t_{11} = -7.36, $p < 0.0001$). Robbing by carpenter bees occurred approximately 1 hr before measurement and affected more than 96% of night-opening flowers (n = 55) compared to only 7% of the morning-opening flowers (n = 14) as quantified by the characteristic damage that carpenter bees inflict to the corolla tube.

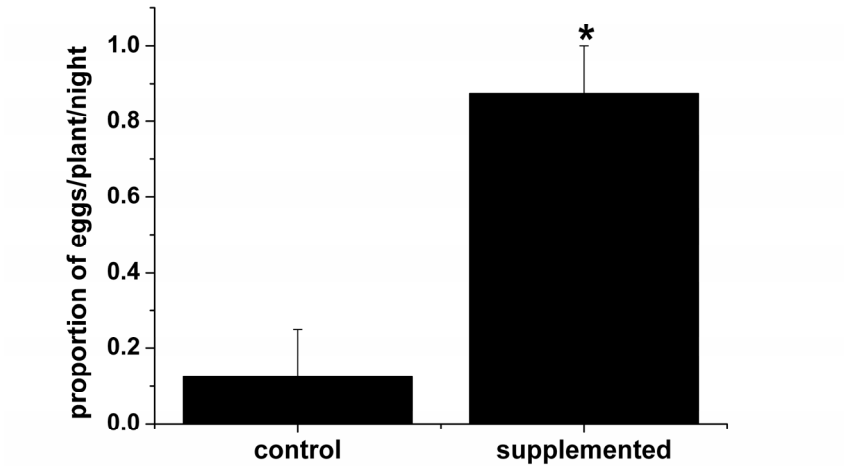

Figure S4. Influence of *N. attenuata* Nectar Volume on the Rate of Oviposition by *Manduca quinquemaculata* Adults on Plants in a Native Population in Utah

The recently opened night-opening flowers (5-8 flowers/plant) from 1.25 m tall, sized-matched pairs of plants were reduced to five and supplemented with 20 µl of a 12.5 % sucrose solution (supplemented) at dusk or left untreated (control). Plants of one pair were at least 5 meters apart and all eggs were removed at the time of supplementation. Newly oviposited *M. quinquemaculata* eggs were counted the following morning and are expressed as mean (±SE) eggs per plant from pairs on which at least one oviposition occurred. Not more than one egg per plant was oviposited, regardless of treatment.

Table S1. Morphology of Night- and Morning-Opening Flowers, Related to Figure 1

	Morning Flower	Night Flower
Corolla diameter *	6.1 ± 1.1	15.6 ± 0.5
Corolla tube length	26.2 ± 0.5	26.1 ± 0.7
Stigma length	24.5 ± 0.6	24.5 ± 0.7
Pistil diameter	1.0 ± 0.1	1.0 ± 0.1
Anther length	14.4 ± 0.6	14.7 ± 0.4

From each of ten plants, one NoF and one MoF was measured between 7 am and 9 am using a ZEISS Stereomicroscope SV 11 with an digital camera (AxioCam) and a program which allowed for accurate measurements (Axio Vision 4.0). Shown are mean ± SD mm. Asterisk (*) represents significant difference between flower types in corolla diameter (paired Student's t test, $t_9 = -20.70$, $p < 0.0001$). During the following evening between 8 pm and 10 pm this difference decreases due to the complete expansion of MoF, but the difference in corolla diameter between NoF (15.7± 0.5) and MoF (13.9± 0.5; paired Student's t test, $t_5 = 5.22$, $p = 0.0034$) remains statistically significant.