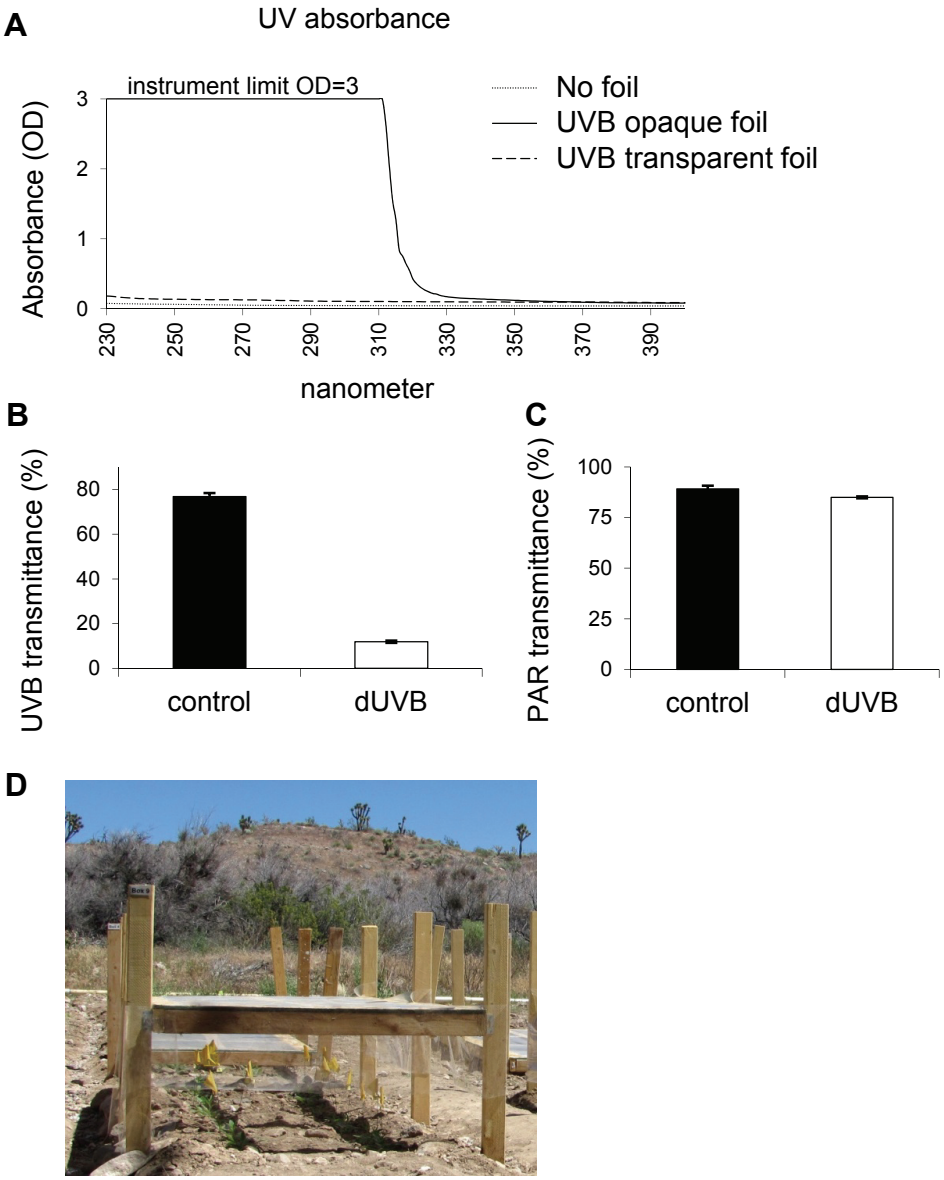
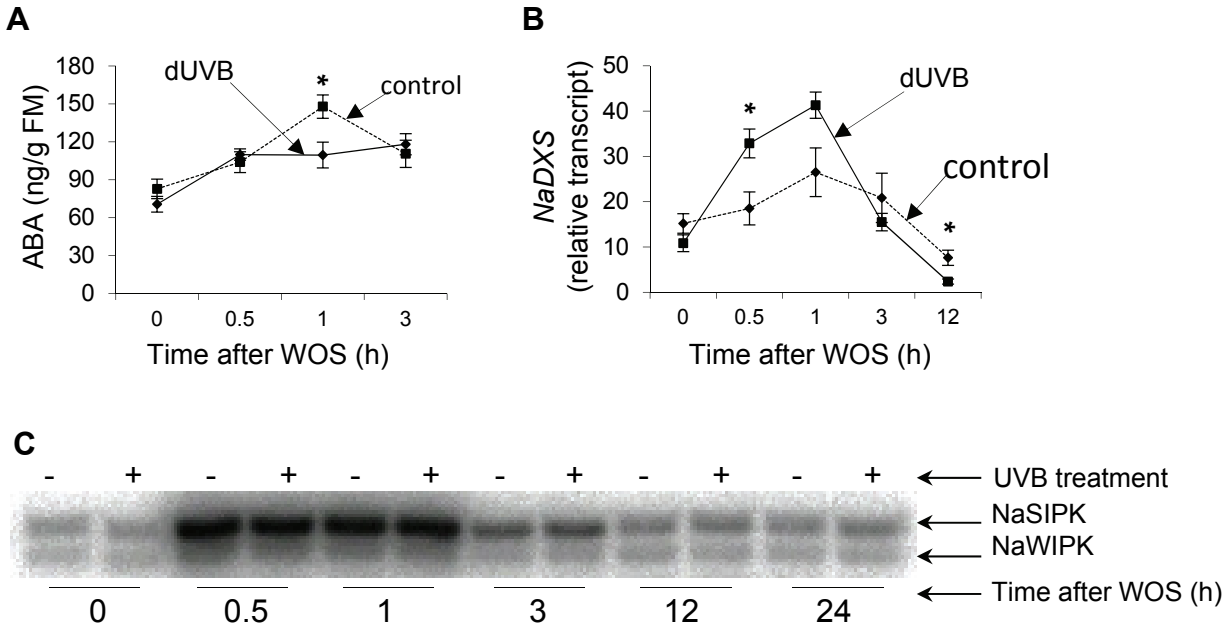


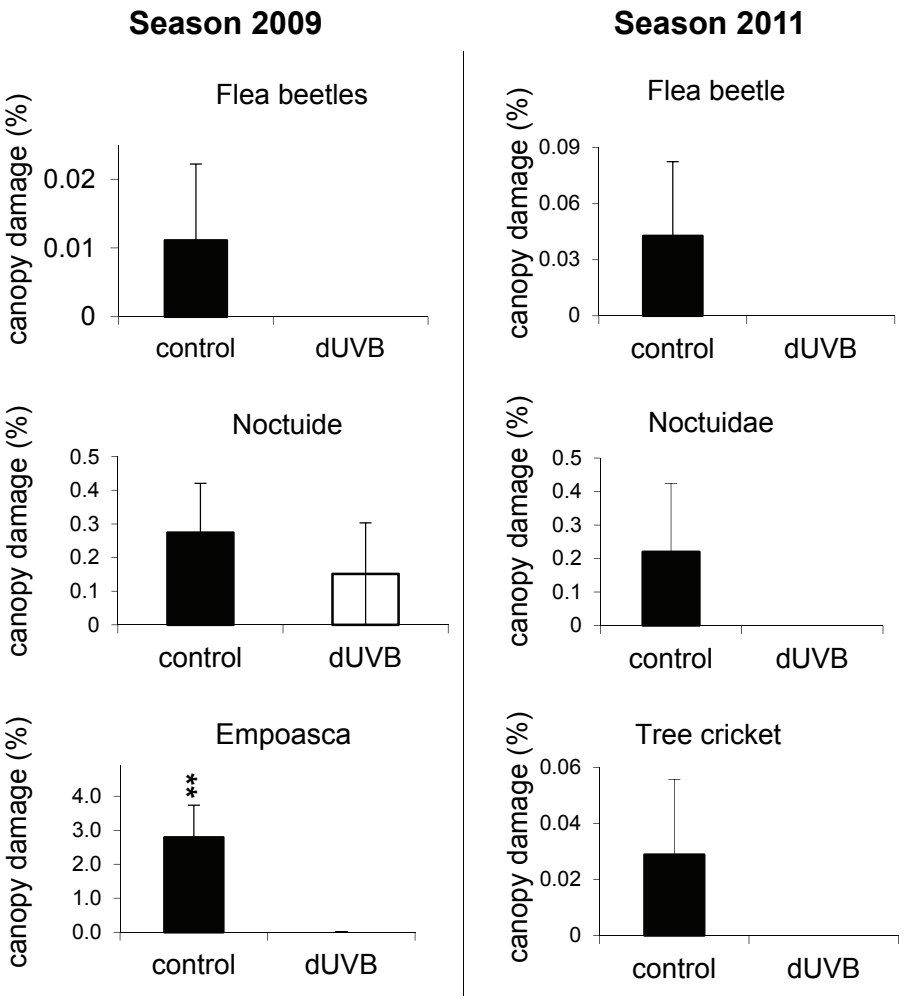
Supplemental Figure 1. A: UVB absorbance of UVB opaque and UVB transparent foils used for the canopies under which plants were grown (see D). The absorbance spectra of plastic foils were determined by a Tecan Infinite M200 Reader (Tecan Group). Transmittance of UVB (**B**) and photosynthetic active radiation (**C**) under near ambient UVB (control) or diminished UVB (dUVB) condition. UVB fluence was measured inside and outside the canopies with a Digital Ultraviolet Radiometer, Model 6.2 UVB (Solartech Inc.), photosynthetic active radiation (PAR) was measured by a Li-190SA quantum sensor connects directly to a Li-COR Li-250A light meter (http://www.licor.com). The percentage of transmittance was calculated by dividing value measured under the canopy by the values measured outside the canopy and expressed as a percentage. **D**: Design of one of 10 replicate canopies under which plants were grown. The height of the canopy was raised as plants grew and foil was added to the sides to ensure that stray radiation did not impinge on plants as the sun moved through the sky. PAR values under the different canopies did not differ and foils were changed 2-3/week as they solarized.



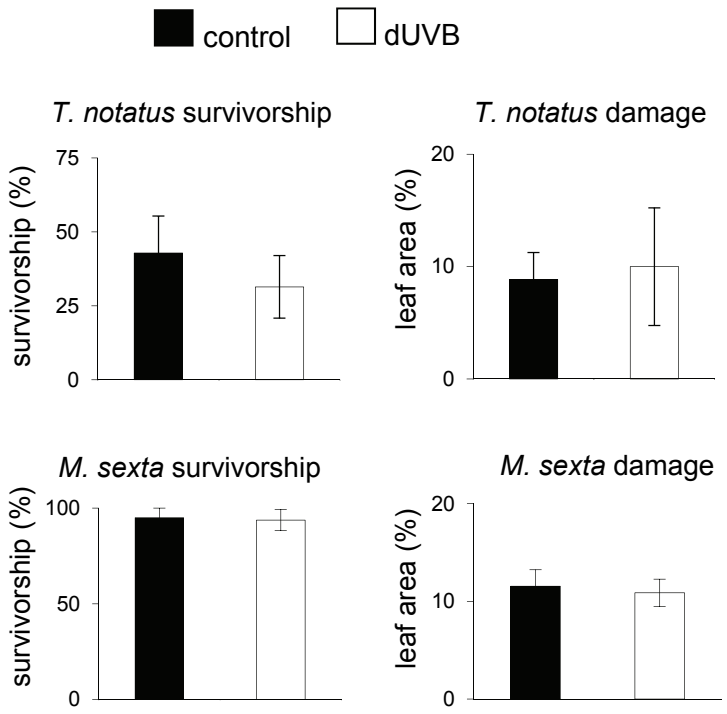
D. The specific primer sequences used for qPCR (SYBR) are as followed.

NaTD forward primer: 5'-TAAGGCATTTGATGGGAGGC-3'
NaTD reverse primer: 5'-TCTCCCTGTTCACGATAATGGAA-3'
NaEF1a forward primer: 5'- CCACACTTCCCACATTGCTGTCA-3'
NaEF1a reverse primer: 5'- CGCATGTCCCTCACAGCAAAAC-3'
NaDXS forward primer: 5'-ATTGATGACAGACCAAGCTGTTT-3'
NaDXS reverse primer: 5'-TATCCTAGTAGAGCCACTCTC-3'

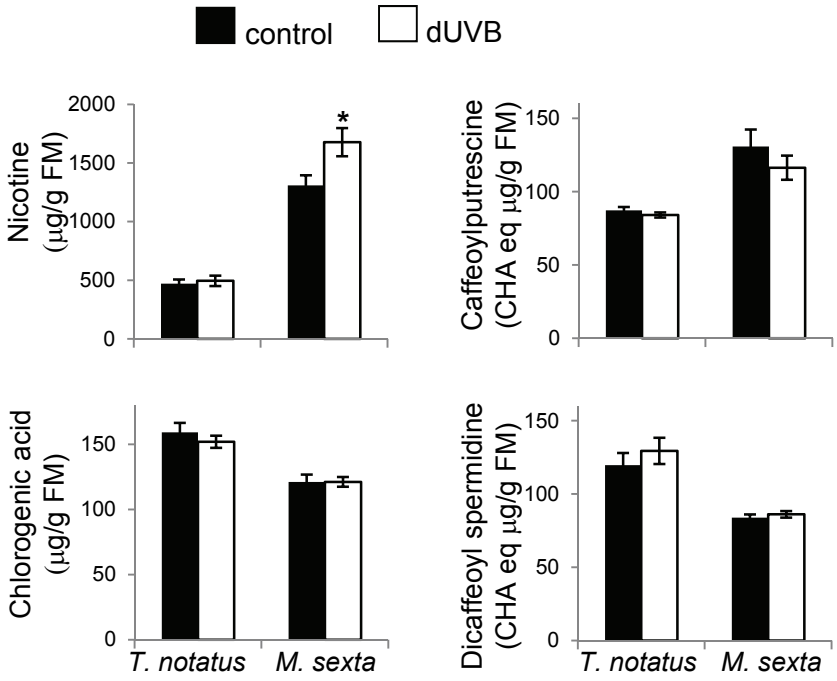
Supplemental Figure 2. Mean (± SE, n≥3) levels of ABA (**A**), relative abundance of *NaDXS* transcripts (**B**) and NaSIPK and NaWIPK activity in OS elicited *N. attenuata* leaves **(C)**. Single leaves were mechanically wounded and the resulting puncture wounds were treated with 20 µL of oral secretions from *M. sexta* larvae (5X diluted in distilled water). Samples were collected 0, 0.5, 1, 3, 12 and 24h after OS elicitation, extracted and analyzed by LC-MS/MS (ABA) and qPCR (*NaDXS*). Protein kinase activity was determined by in-gel kinase activity assay (NaSIPK and NaWIPK). Comparisons of near ambient UVB (control and assigned as "+" in C) or diminished UVB (dUVB, assigned as "-" in C) were determined for individual time points by ANOVAs, Fisher's PLSDs: * $P \leq$ 0.05. SE, standard error; FM, fresh mass. **D**. Specific primer sequences used for qPCR in the SYBR Green assays.



Supplemental Figure 3. Herbivore damage in season 2009 and 2011.
Mean (± SE, n≥11) levels of herbivore damage grown under near ambient UVB (control) or diminished UVB (dUVB) treatments. Types of herbivore damage were identified and categorized based on the characteristic feeding damage of the different herbivore taxa. Comparisons between near ambient UVB (control) or diminished UVB (dUVB) treatments were performed by Kruskal-Wallis Test: ** $P \leq 0.01$. SE, standard error.

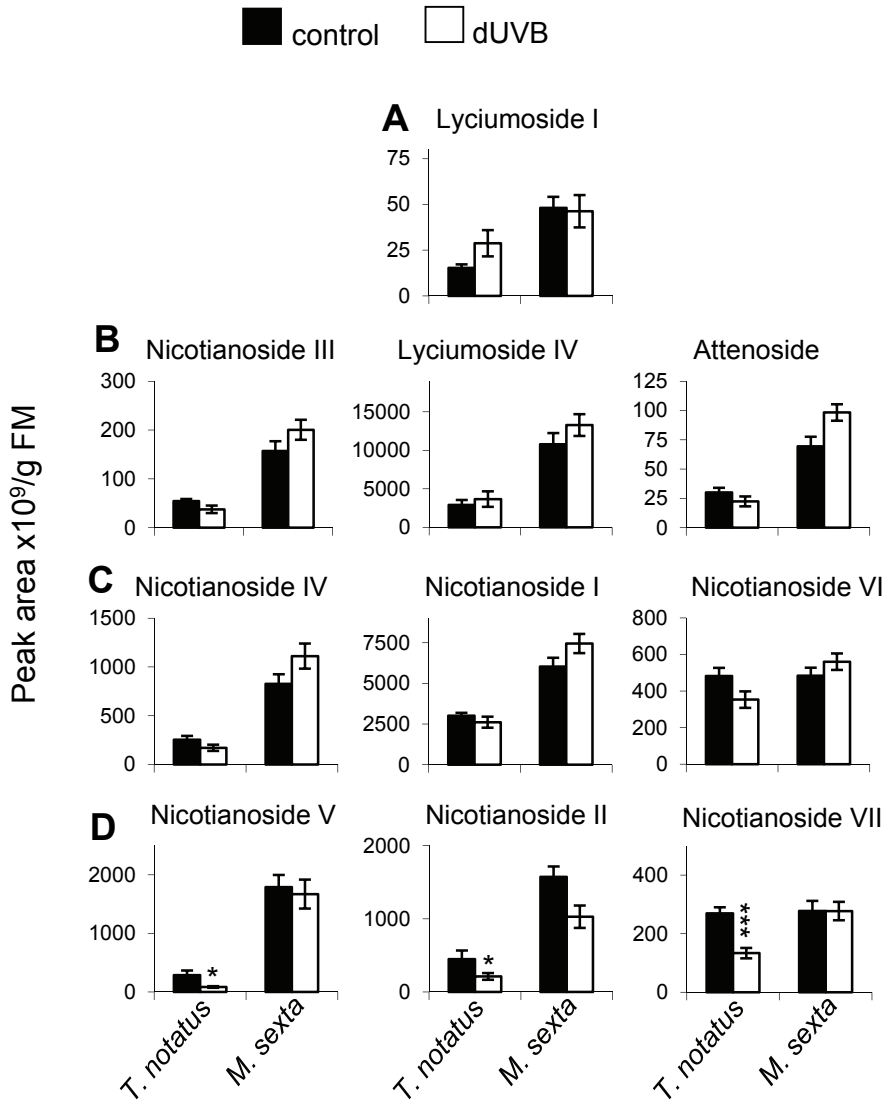


Supplemental Figure 4. Leaf damage and survivorship of *T. notatus* and *M. sexta* under different UVB fluences.
Mean (± SE. n≥7) survivorships of two different native herbivore species from different feeding guilds feeding on EV plants exposed to near ambient UVB (control) or diminished UVB (dUVB) treatments in the 2011 field season. Plants were attacked by either 5 adult *T. notatus* or two *M. sexta* neonates enclosed in a clip-cage on a single *N. attenuata* leaf of separate plants. Observations were made after 3 d. Comparisons between treatments were performed Kruskal-Wallis Test; SE: standard error.



Supplemental Figure 5. Accumulation of nicotine, CHA, CP and DCS in no-choice experiment under different UVB fluences.

Mean (± SE, n≥7) accumulation of nicotine, caffeoylputrescine (CP), chlorogenic acid (CHA) and dicaffeoylspermidine (DCS) in leaves of plants exposed to near ambient UVB (control) or diminished UVB (dUVB) and attacked by two different native herbivore species from different feeding guilds. Plants were attacked by either 5 adult *T. notatus* or two *M. sexta* neonates enclosed in a clip-cage on a single EV *N. attenuata* leaf of separate plants. Attacked leaves were collected after 3 d and analyzed by HPLC-PDA. Comparisons between near ambient UVB (control) or diminished UVB (dUVB) treatments were made for each insect by ANOVA test, Fisher's PLSDs: * $P \leq 0.05$. SE, standard error. CHA eq, chlorogenic acid equivalents. The experiment was conducted in the field during the 2011 season.



Supplement Figure 6. Accumulation of individual HGL-DTGs after 3 d feeding by different insects.

Either five adult *T. notatus* or two *M. sexta* neonates were kept in a clip-cage on a single leaf of EV *N. attenuata.* Attacked leaves were collected after 3 d, extracted and analyzed by LC-MS/MS. Comparisons near ambient UVB (control) or diminished UVB (dUVB) treatments were made for each insect by ANOVA test, Fisher's PLSDs: * $P \leq 0.05$, ** $P \leq 0.01$, *** $P \leq 0.001$. A: precursor; B: core HGL-DTGs; C: malonylated HGL-DTGs; D: dimalonylated HGL-DTGs. SE: standard error; FM: fresh mass. The experiment was conducted in the field during the 2011 season.