



Supplementary Figure S1: Transverse leaf sections of WT and *gpt2* before and after HL acclimation

8-week old WT and *gpt2* leaves maintained at LL ( $100 \mu\text{mol m}^{-2} \text{s}^{-1}$ ) were harvested or acclimated for 7 days at HL ( $400 \mu\text{mol m}^{-2} \text{s}^{-1}$ ) and harvested. Representative images are shown, with no gross changes in leaf morphology being seen during acclimation to HL. Sections of mature leaves, from the midrib extending towards the leaf margin were used, as shown by the red box at the right of the graphic. Harvested leaf sections were dehydrated and embedded in resin using a JB4 embedding kit (Polysciences, Warrington, PA, USA). Sections of  $5 \mu\text{m}$  were stained using Toluidine blue, cleared with xylene and mounted using DPX mountant (Sigma).