

# Supplemental Figures

Drozdova *et al.*

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# 1 Diversity of opsin transcripts and their phylogenetic distribution

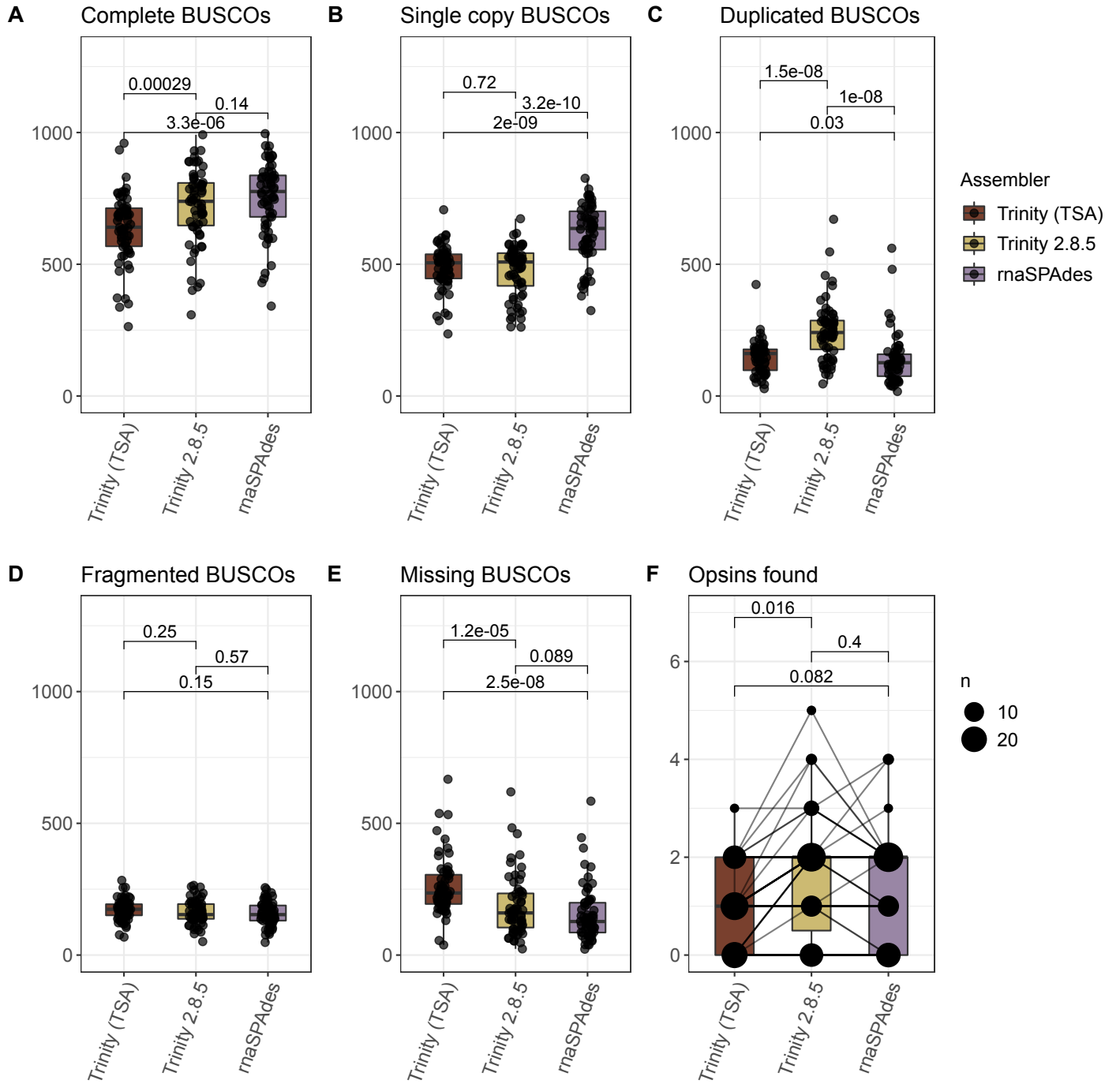


Figure S1: Quality of transcriptome assemblies according to BUSCO metrics (A-E) and the number of opsins found in each assembly (F).

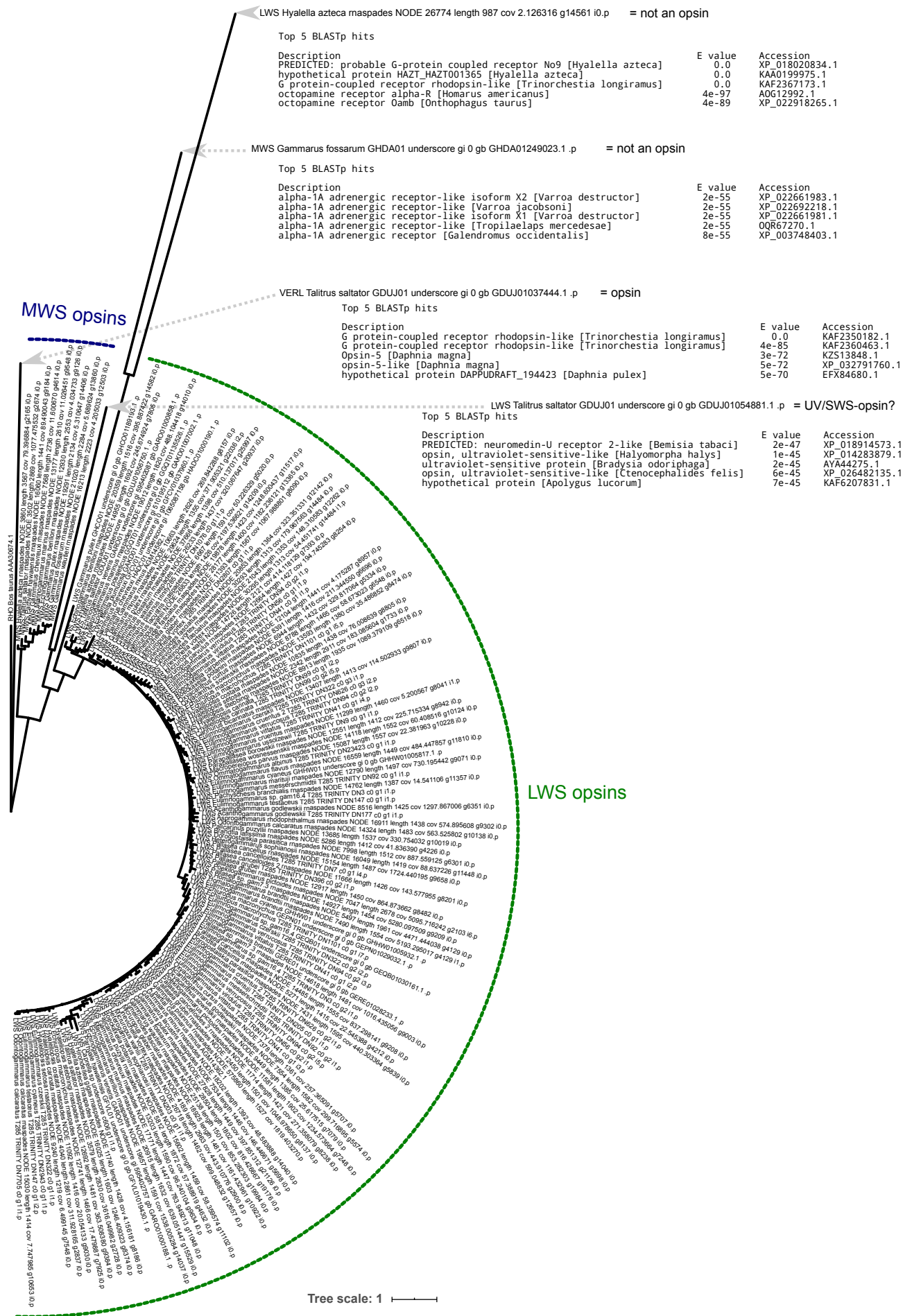


Figure S2: (A) An amino acid-based maximum likelihood tree of all found opsin sequences and reanalysis of long branches with NCBI BLAST.

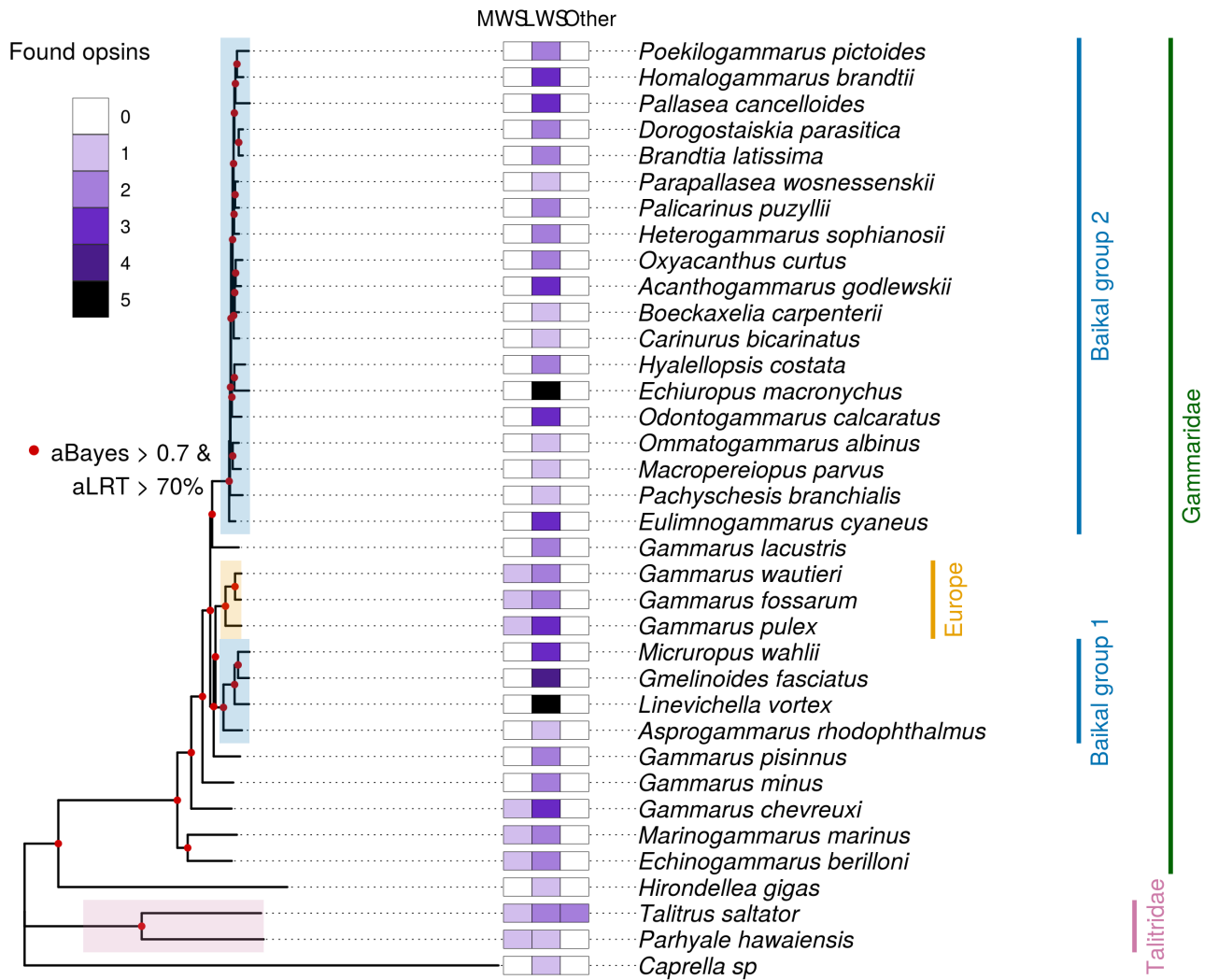


Figure S2: (B) Amino acid-based species tree based on one-copy orthologous proteins.

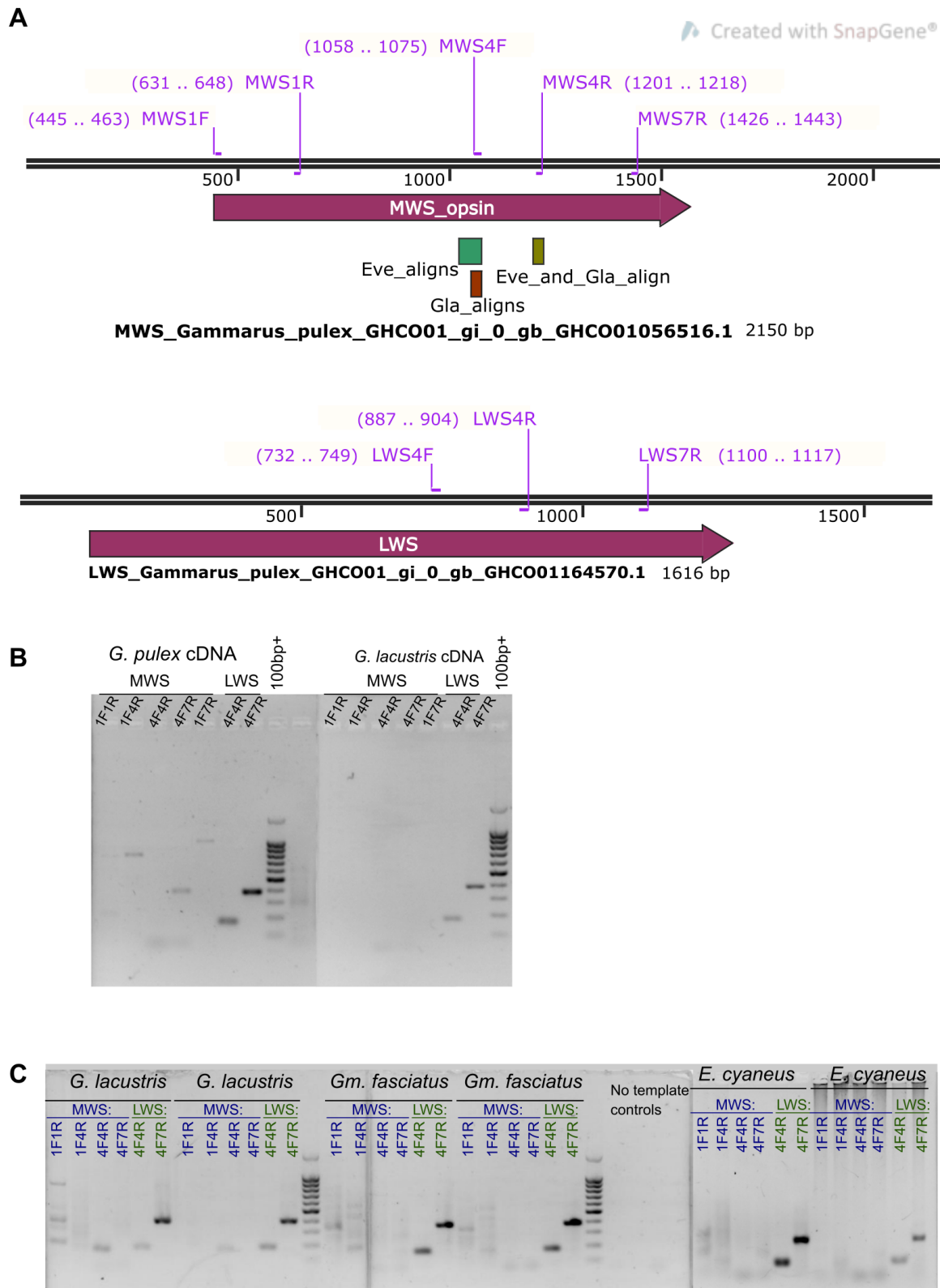


Figure S3: Amplification of MWS and LWS opsins from extracted genomic DNA of several species. (A) Schematic of primer binding sites. (B) Opsin amplification from *G. pulex* and *G. lacustris* cDNA. (C) Opsin amplification from genomic DNA of several species.

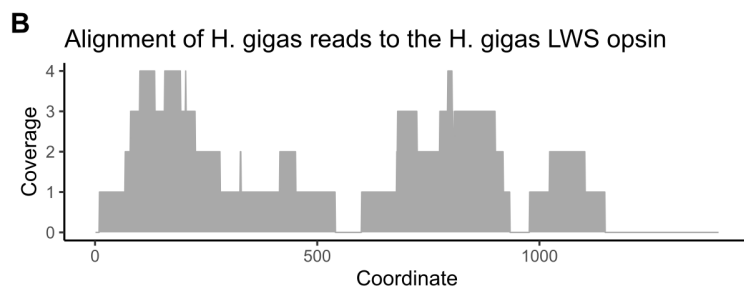
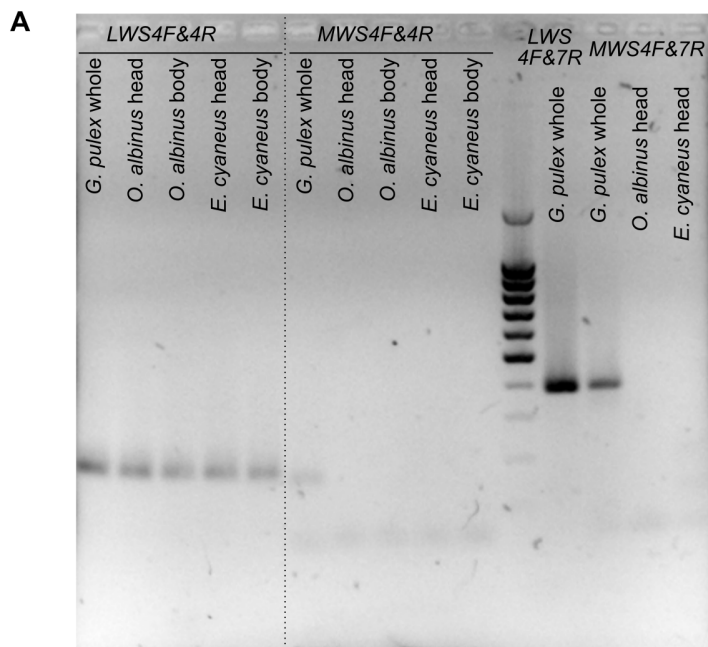


Figure S4: Evidence for extraocular expression of opsins in amphipods. (A) Opsin amplification from cDNA of several species. (B) Expression of the *H. gigas* LWS opsin in the sample from pereon and pleon.

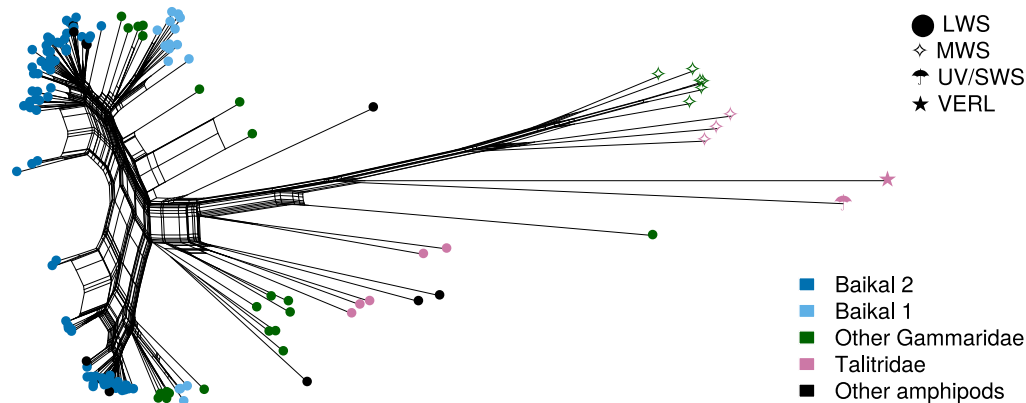


Figure S5: Phylogenetic network of all found amphipod opsins based on nucleotide sequences.

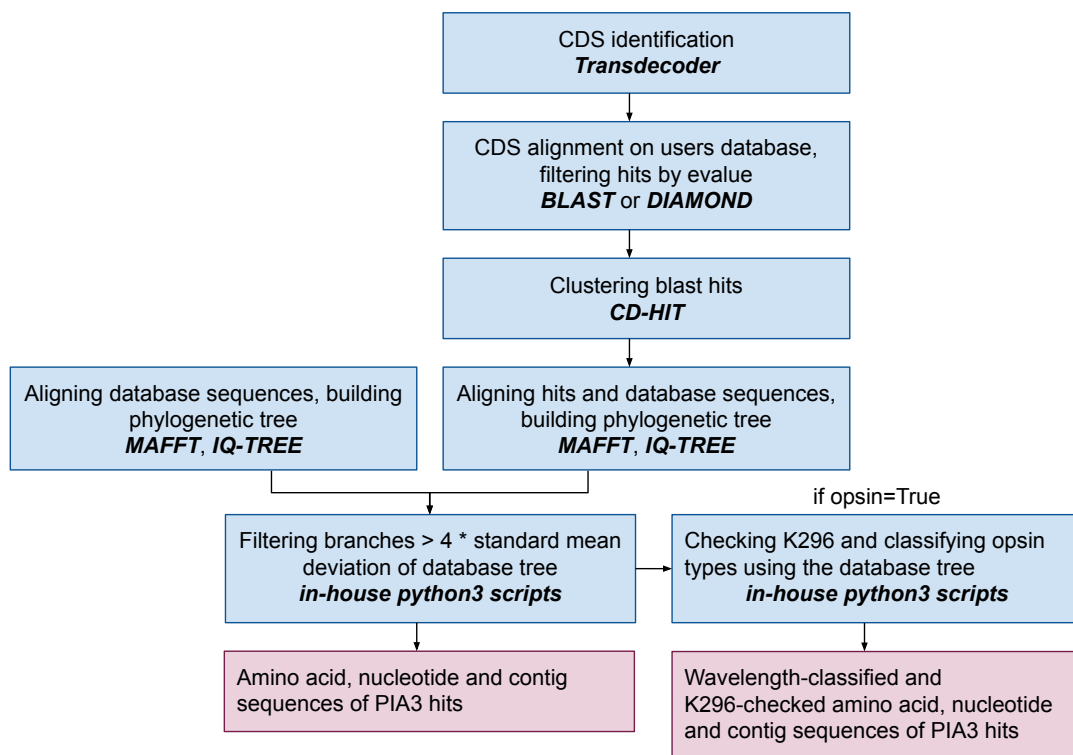


Figure S6: PIA principle.

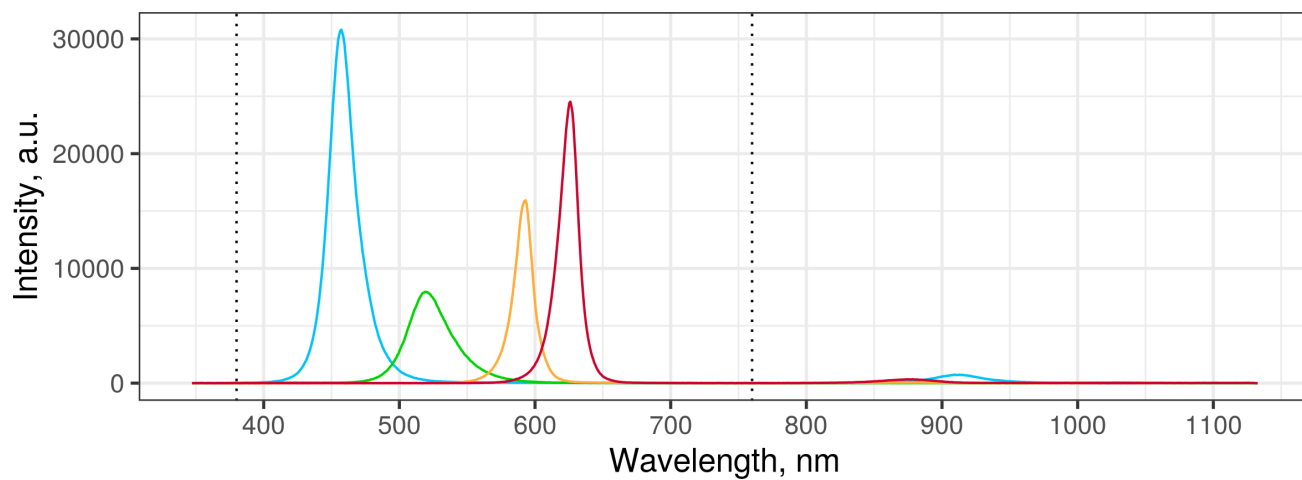


Figure S7: Emission spectra of the LED light sources.