

**Figure S10.** Sequence inversion in the *D. Grimshavi vrille* promoter.

A fragment in the *D. grimshawi vri* promoter harboring two conserved E1-E2 instances, (\* and +, Fig. S2C) is inverted with respect to all other species. This explains why the Grimshawi sequence is missing form the UCSC multiple alignment in Fig. S2C.