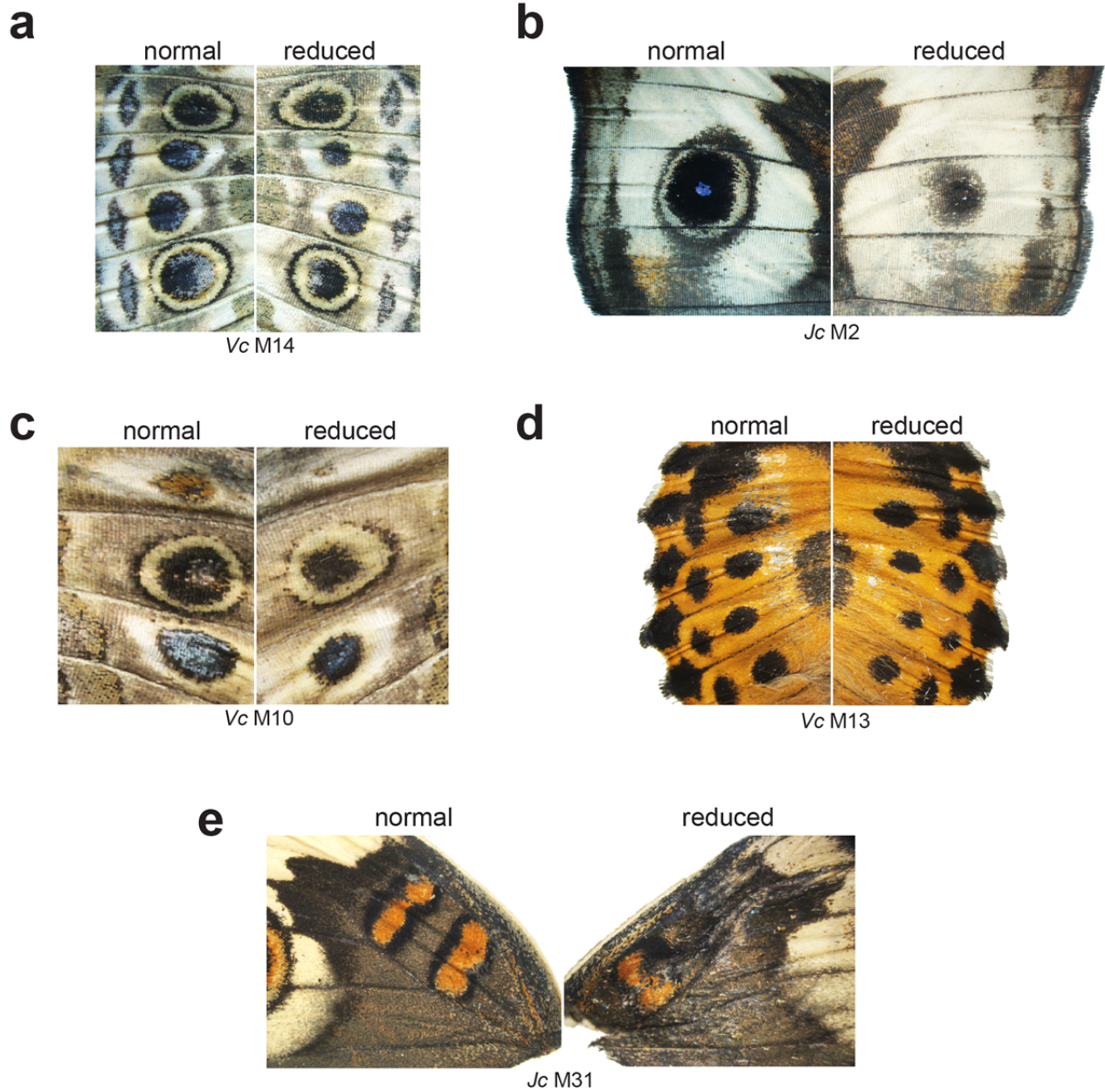
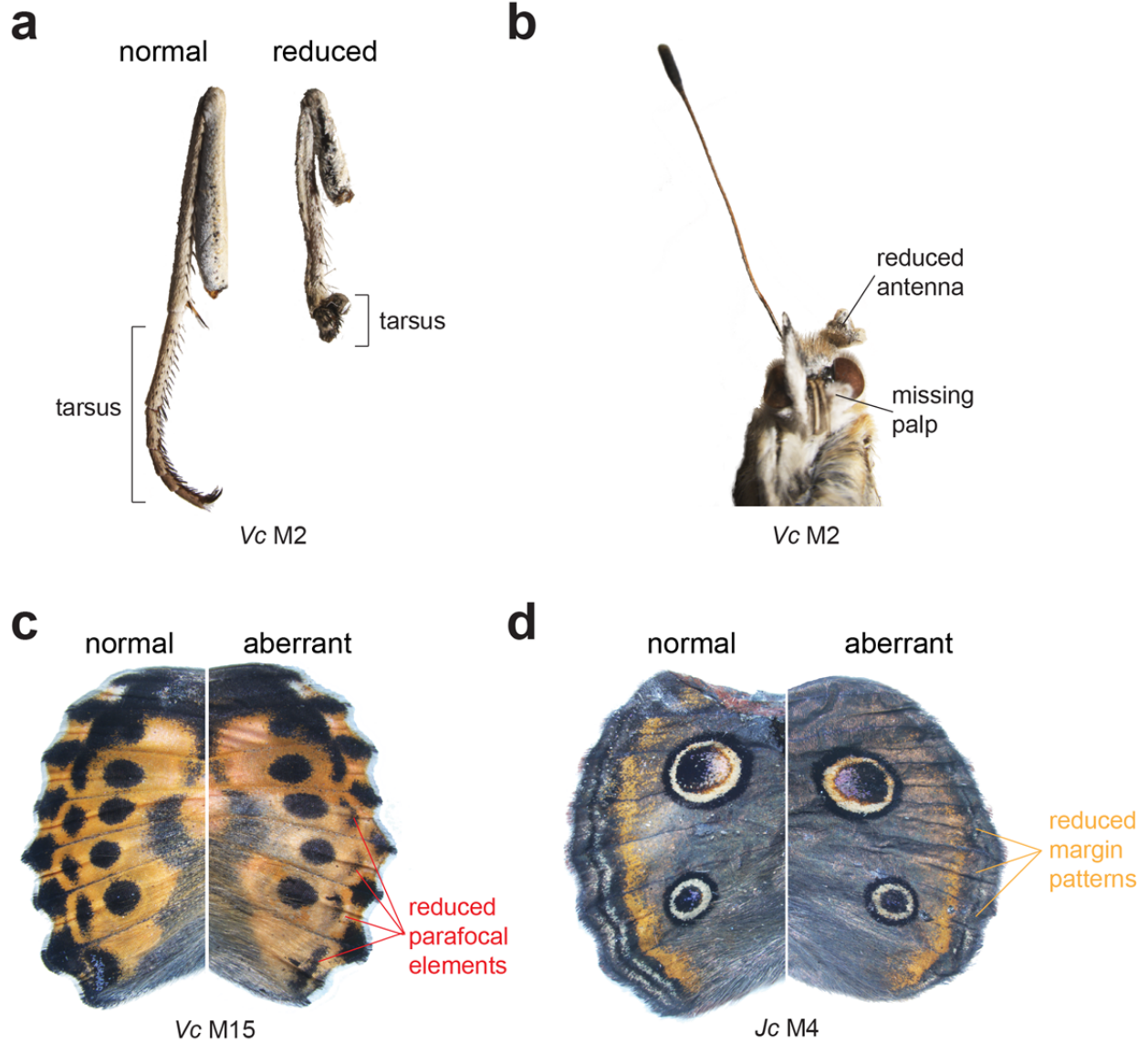


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Supplementary Figure 1: Additional examples of color pattern reduction caused by *spalt* deletions. Examples of minor eyespot reduction phenotypes: (a) *V. cardui* ventral hindwing; (b) *J. coenia* ventral forewing; (c) *V. cardui* ventral hindwing; (d) *V. cardui* dorsal hindwing. (e) Loss of discal spot on a *J. coenia* dorsal forewing associated with vein abnormalities.



Supplementary Figure 2: Additional examples of *Dll* deletion phenotypes. (a) Reduction of the distal leg (tarsus) in *V. cardui*. (b) Bilateral reduction of antenna and palp in *V. cardui*. (c) Reduction of parafoveal elements on *V. cardui* dorsal hindwing. (d) Reduction of margin patterns on dorsal *J. coenia* hindwing.

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Supplementary Table 1: sgRNAs and primers used in this study

Target gene	sgRNA name	sgRNA sequence*	Genotyping primers
<i>V. cardui</i>	Vcddc_sgRNA1	GAAATTAATACGACTCACTATA GG AGTACCGTTACCTGATGAGTTTTA GAGCTAGAAATAGC	5'-GCTGGATCAGCTATCGTCT
<i>Ddc</i>	Vcddc_sgRNA2	GAAATTAATACGACTCACTATA GG TGGTCGTGTTTCAAGTAGAGTTTTA GAGCTAGAAATAGC	5'-GCAGTAGCCTTTACTTCCCTCCCAG
<i>V. cardui</i>	Vcspalt_sgRNA1	GAAATTAATACGACTCACTATA GG ACCAATTTCAATAGCAACGTTTTAGAGCTAGAAATAGC	5'-AGCAACGAAGATCAAATTGGCAGA
<i>spalt</i>	Vcspalt_sgRNA2	GAAATTAATACGACTCACTATA GG GGAATATTGGCGGAGGGAGTTTTAGAGCTAGAAATAGC	5'-ATGGGAGGGAAGCCGTTGTG
<i>V. cardui</i>	Vcdll_sgRNA1	GAAATTAATACGACTCACTATA GG GCCTCCTCAGTCCTCGGAGTTTTAGAGCTAGAAATAGC	5'-GTGATAGTGATGCTGTGTACTGCAGTT
<i>Distal-less</i>	Vcdll_sgRNA2	GAAATTAATACGACTCACTATA GG AGAATCCTCATGAAGCCTCGTTTTAGAGCTAGAAATAGC	5'-CGCACTGTGGAGCATAGGAACCT
<i>J. coenia</i>	Jcspalt_sgRNA1	GAAATTAATACGACTCACTATA GG AACGTTTAGAACAAAGTGAGGGTTTTAGAGCTAGAAATAGC	5'-CAATGCAAAATGGGAGAAGAACG
<i>spalt</i>	Jcspalt_sgRNA2	GAAATTAATACGACTCACTATA GG TGGGTCTTCCCTTCCCGTTTTAGAGCTAGAAATAGC	5'-GAATTGTGCTACGGCAACTTTTGT
<i>J. coenia</i>	Jcdll_sgRNA1	GAAATTAATACGACTCACTATA GG GCCTCCTCAGTCCTCGGAGTTTTAGAGCTAGAAATAGC	5'-TGGGGGCATAGGAACCTAAATG
<i>Distal-less</i>	Jcdll_sgRNA2	GAAATTAATACGACTCACTATA GG AAACCCTGATGCCTCGTGTGTTTTAGAGCTAGAAATAGC	5'-TTACCCGAATTCAATCCCCTAGTAC

*: sgRNAs designed with GGN18NGG rule are marked with red GG; sgRNAs designed with N20NGG rule are marked with blue GG.