FIGURE 11.9. Examples of four-winged insects include dragonflies (A) and butterflies (B), whereas flies (C) are two-winged insects. (D–F) Three hypotheses for the evolution of two-winged insects from a four-winged ancestor. In D, there was no Ubx gene in the ancestor, and it arose only in the lineage leading to flies. In E, the anterior expression boundary of Ubx shifted anteriorly from A1 to T3. In F, the pattern of Ubx did not change, but the targets of Ubx regulation did. As explained in the text, the data available suggest that the third hypothesis, shown in F, is the most likely explanation.


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