FIGURE 11.34. Ectopic expression of Pax6 creates ectopic eyes. (Top) Inappropriate expression of Drosophila eyeless in the wing imaginal disk results in the formation of an eye (red structure) on the wing. Flies also contain a second Pax6 gene, called twin-of-eyeless, which can also create ectopic eyes. (Bottom) Ectopic expression of twin-of-eyeless in leg imaginal disks results in eyes (red structure) on the adult legs. Even misexpression of the mouse Pax6 (Sey) gene in Drosophila leads to the formation of ectopic eyes—these are, of course, ectopic fly eyes and not mouse eyes on the flies! Likewise, ectopic expression of Drosophila eyeless gene in frogs leads to ectopic frog eye structures in frogs.

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