



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.