



FIGURE 11.24. *Pitx1* mRNA expression in marine vs. Paxton Lake benthic sticklebacks. *Pitx1* expression (blue staining in all panels) is seen around the mouth of both fish (arrowheads in A and C). In the pelvic area, however, *Pitx1* expression is seen in the marine fish (arrowhead in B), but is absent from the benthic fish (D; the label “pect” shows the position of the anterior pectoral fins). This suggests that changes in the regulation of the *Pitx1* gene underlie the morphological differences seen in the pelvis and pelvic spines between these fish. It has been predicted that the marine fish possess both a head (mouth) enhancer and pelvic enhancer that cause *Pitx1* to be expressed in these two locations (E). In the benthic fish, the pelvic enhancer is presumably absent, and thus expression of *Pitx1* is seen in only the mouth (F).

11.24, Shapiro M. et al., *Nature* **428**: 717–723, © 2004 Macmillan, www.nature.com