Name	Class	Date	

#### **Chapter 33 Comparing Chordates**

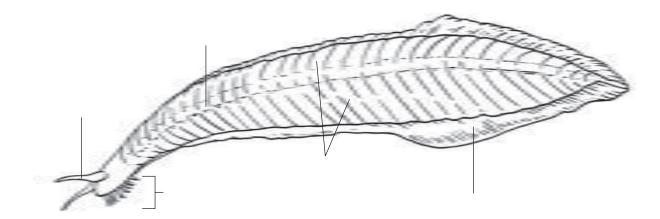
# Section 33-1 Chordate Evolution (pages 849-852)

### **C** Key Concepts

- What are the roots of the chordate family tree?
- What is a main trend in the evolution of chordates?

#### **Chordate Origins** (page 849)

- **1.** Studies of embryos of living organisms suggest that the most ancient chordates were closely related to \_\_\_\_\_\_\_.
- 2. Why do scientists consider *Pikaia* to be an early chordate and not a worm?
- **3.** In the diagram below, label the notochord, head region, paired muscle blocks, tentacle, and tail fin of *Pikaia*.



- **4.** A flexible, supporting structure found only in chordates is a(an) \_\_\_\_\_\_
- **5.** Is the following question true or false? Scientists study tunicate larvae to better understand the early evolution of chordates. \_\_\_\_\_\_

### The Chordate Family Tree (page 850)

- **6.** Circle the letter of each sentence that is true about the chordate family tree. (See Figure 33–2 on page 850 of your textbook.)
  - a. Vertebrates share a common invertebrate ancestor with tunicates and lancelets.
  - **b.** Mammals and fishes share a more recent common ancestor than mammals and birds.
  - c. Lungs evolved before paired appendages.
  - d. Endothermy evolved after the amniotic egg.

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volutionary Trend	ls in Vertebrates (page 8	251)
	cientists use to study the evolution	•
•	pearance of new adaptations ha	
• What is convergent ev	rolution?	
When does convergen	t evolution occur?	
	of convergent evalution?	
. What is one example o	or convergent evolution:	
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# **Reading Skill Practice**

By looking carefully at photographs and illustrations in textbooks, you can help yourself better understand what you have read. Look carefully at Figure 33–3 on page 851 in your textbook. What idea does the photograph communicate?