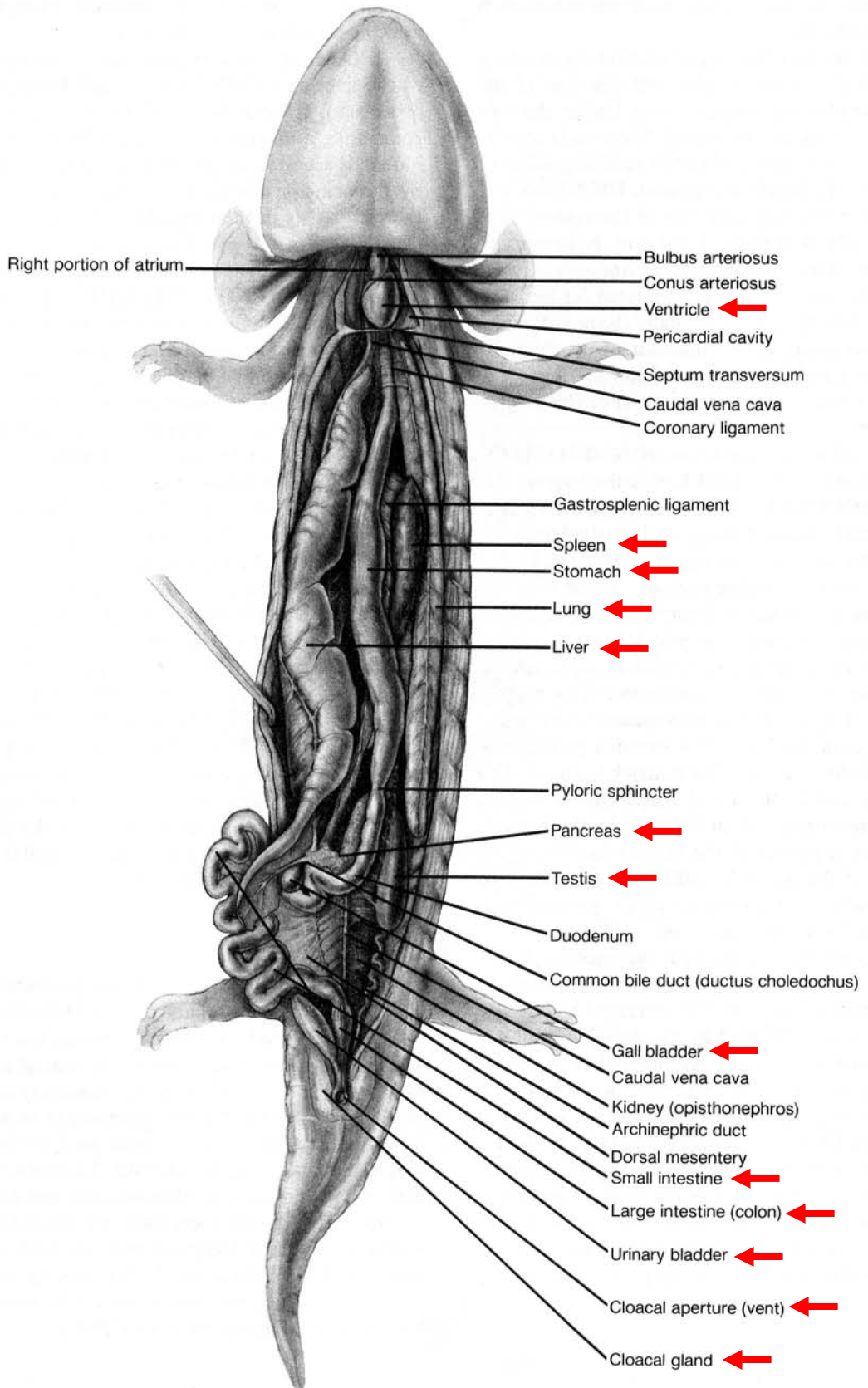


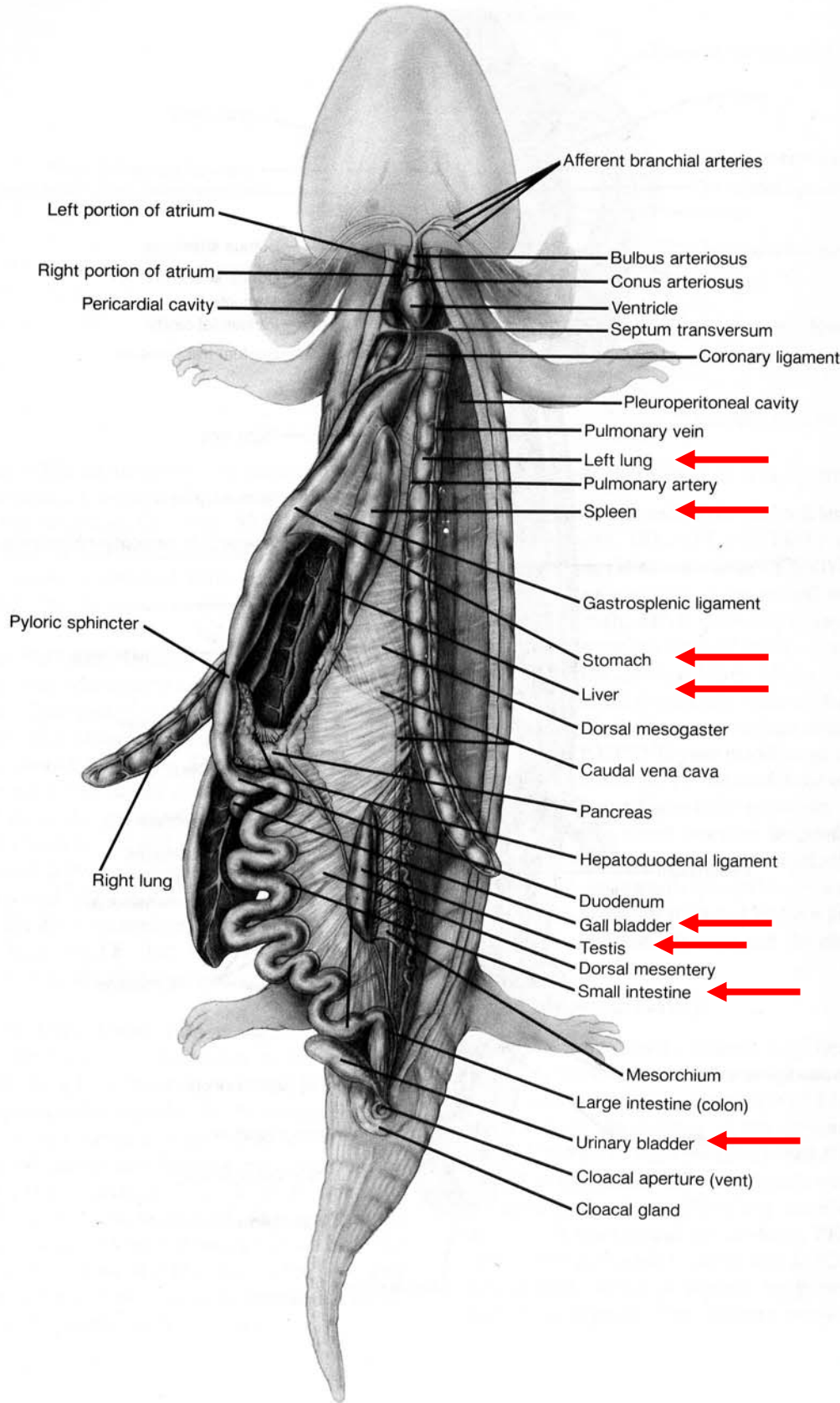
Necturus dissection

- Print out the following diagrams.
- You are responsible for knowing anything marked with a red arrow, or so indicated at the top of the page.
- You should be able to answer any questions listed in this document.

Figure 4.2 In situ position of the viscera that are associated with the pericardial and pleuroperitoneal sacs.

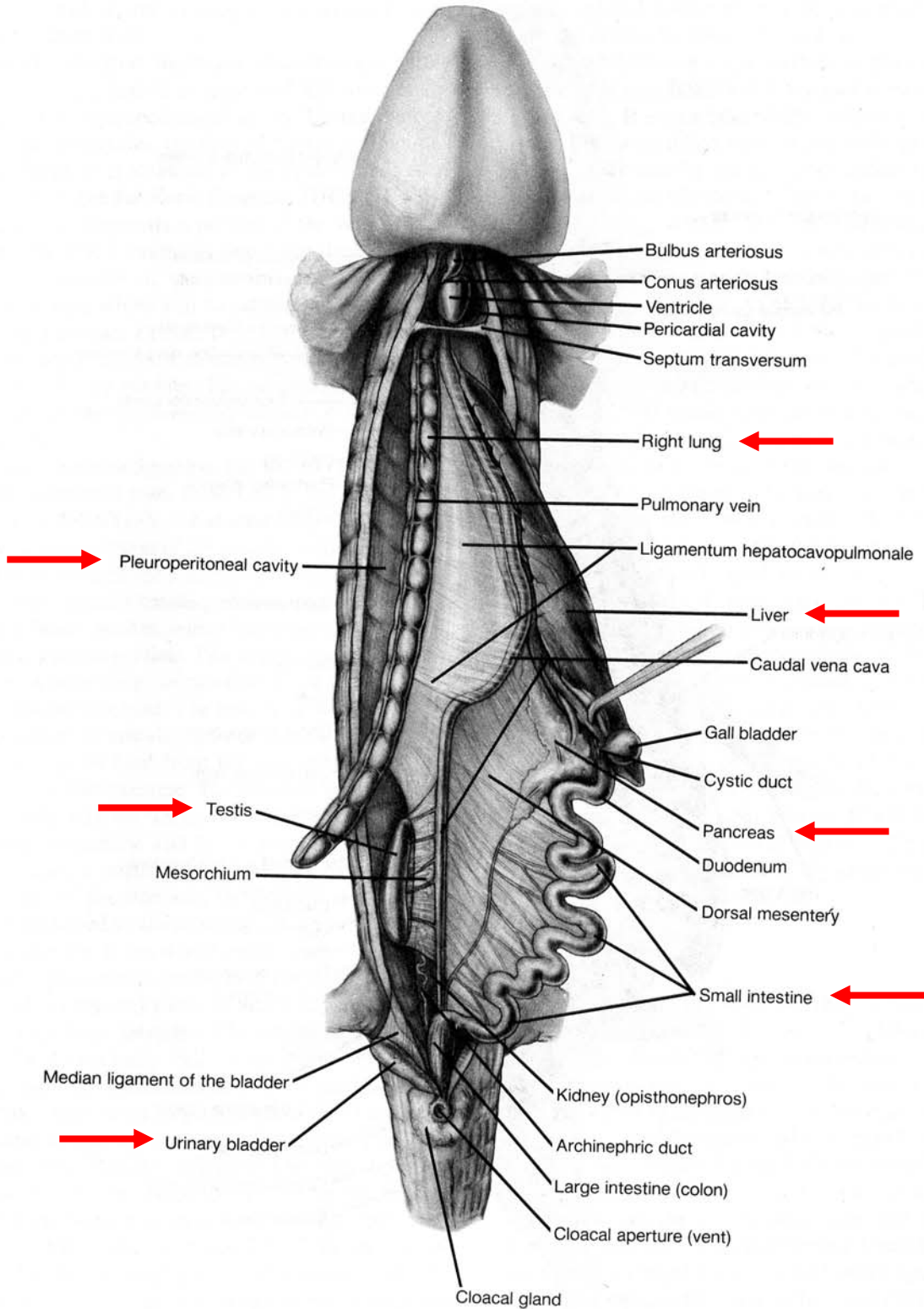


View of pleuroperitoneal cavity with viscera displaced to the right



- Afferent branchial arteries
- Left portion of atrium
- Right portion of atrium
- Pericardial cavity
- Bulbus arteriosus
- Conus arteriosus
- Ventricle
- Septum transversum
- Coronary ligament
- Pleuroperitoneal cavity
- Pulmonary vein
- Left lung
- Pulmonary artery
- Spleen
- Gastrosplenic ligament
- Pyloric sphincter
- Stomach
- Liver
- Dorsal mesogaster
- Caudal vena cava
- Pancreas
- Hepatoduodenal ligament
- Duodenum
- Gall bladder
- Testis
- Dorsal mesentery
- Small intestine
- Mesorchium
- Large intestine (colon)
- Urinary bladder
- Cloacal aperture (vent)
- Cloacal gland
- Right lung

View of pleuroperitoneal cavity with viscera displaced to the left



Know all:

Figure 4.8 Internal view of the oral cavity, pharynx, and esophagus.

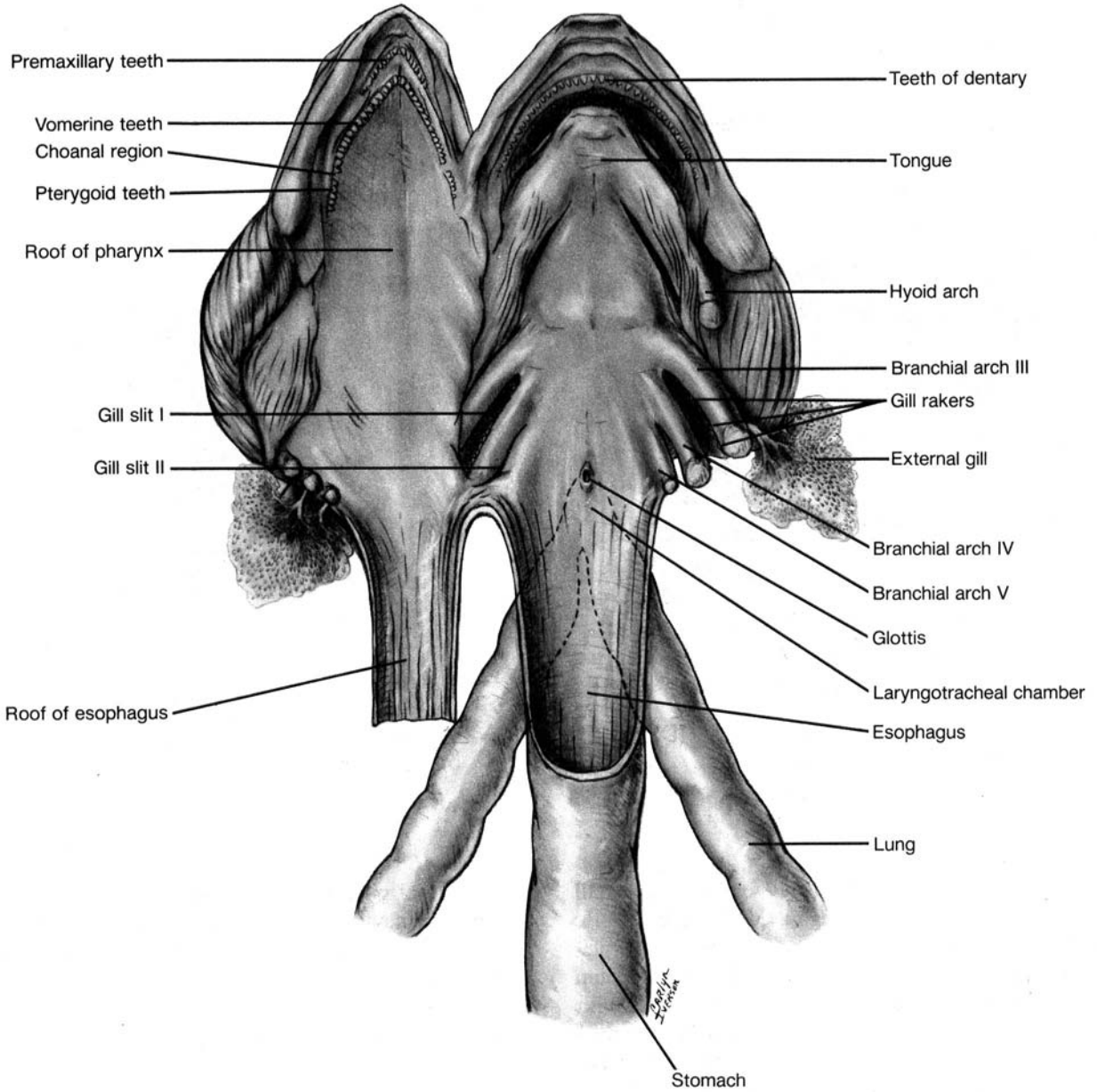


Figure 3.6 Lateral view of the musculature of *Necturus maculosus*: (a) complete view; (b) deep dissection of the area between the levator mandibulae externus and branchiohyoideus muscles that reveals the depressor mandibulae muscle; (c) deep dissection of the thigh that reveals the iliofibularis muscle; and (d) deep dissection of the thigh and crus that reveals the iliofemorals and popliteus muscles. Note the windows that have been made within the hypaxial trunk musculature in (a) to reveal the internal oblique and transversus abdominis muscles.

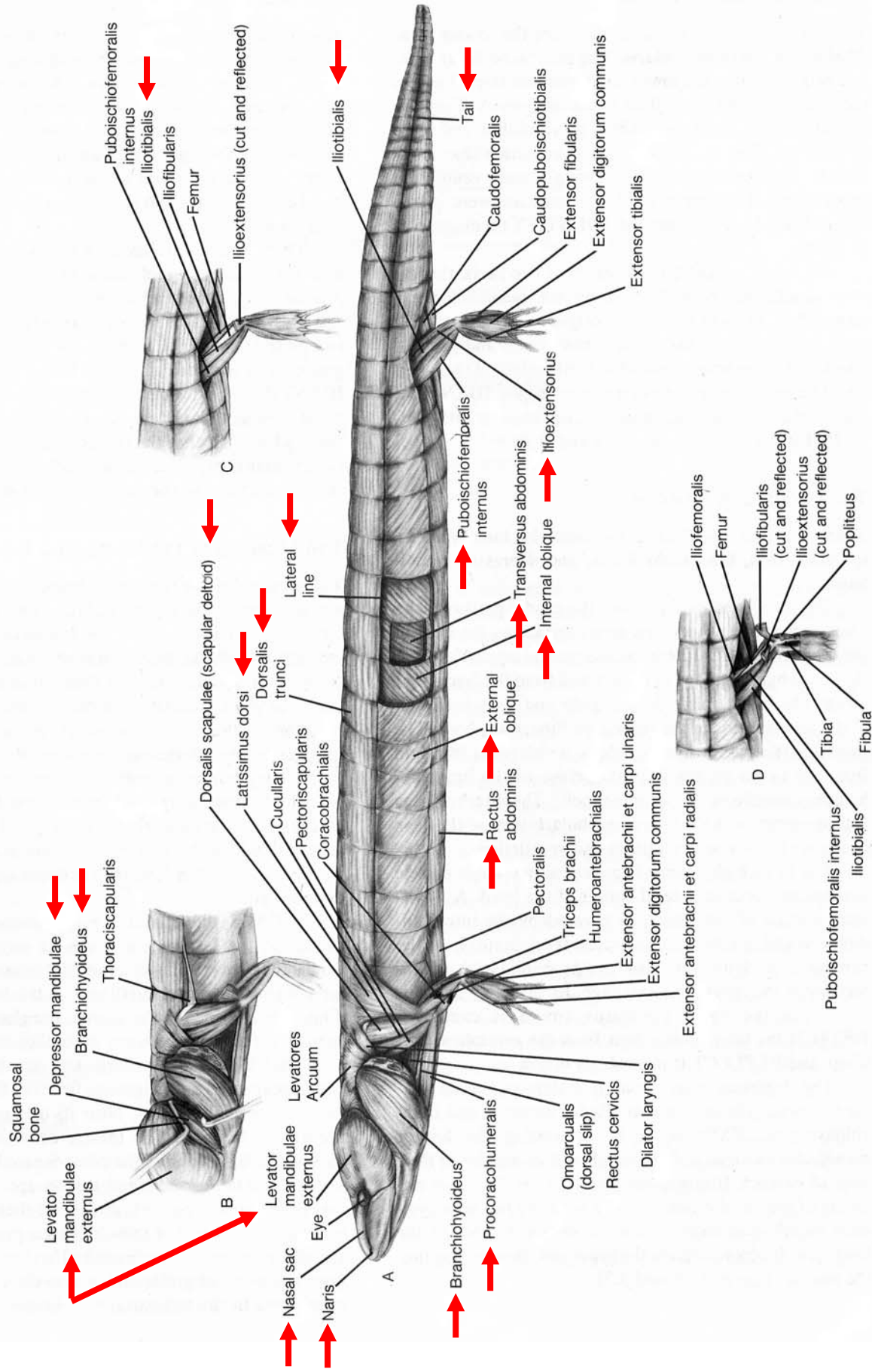


Figure 3.4 Dorsal view of the musculature of *Necturus maculosus*. A portion of the dorsalis trunci has been

reflected on the left side to reveal the interspinales, intertransversarii, and subvertebralis muscles.

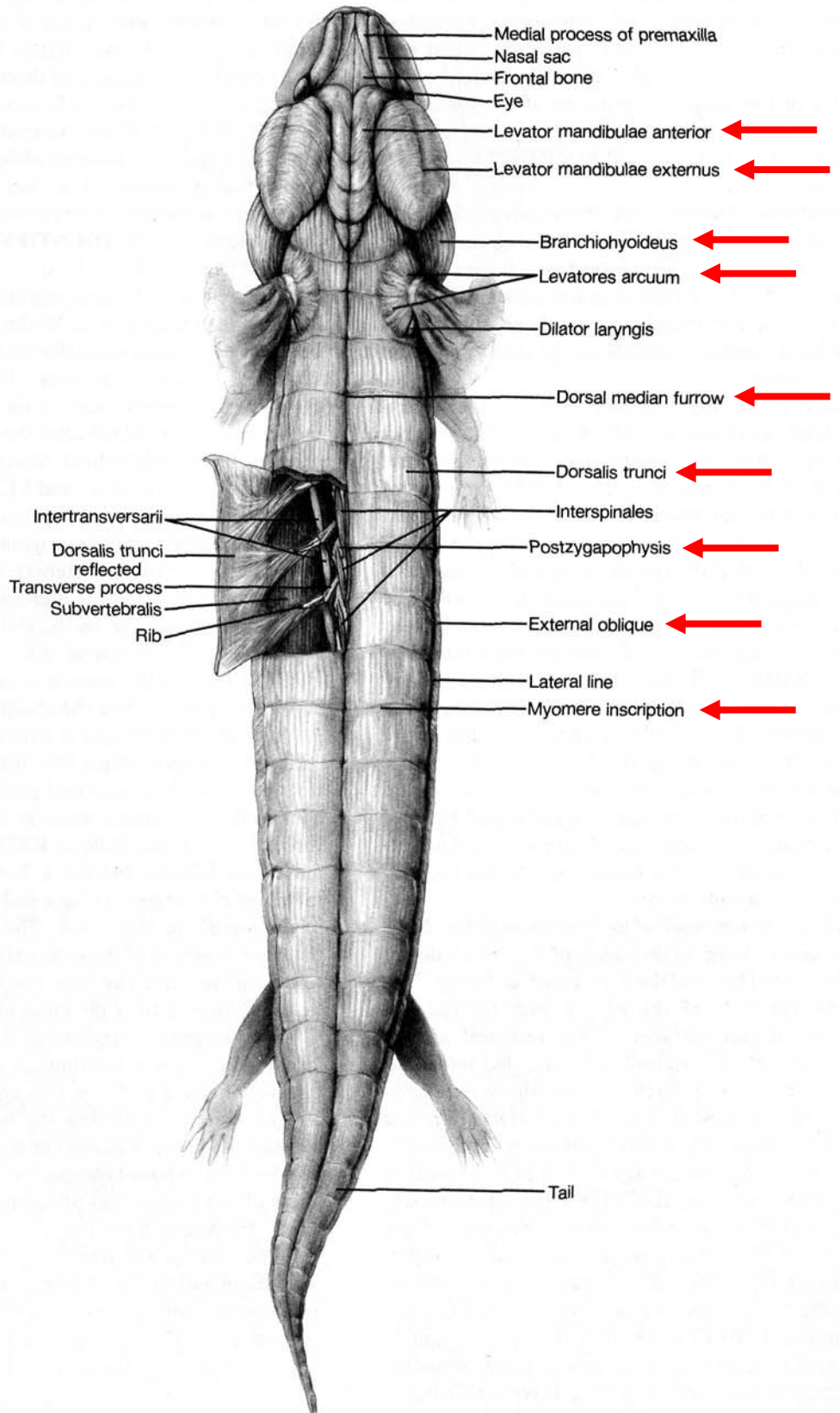


Figure 3.5 Ventral view of the musculature of *Necturus maculosus*. The diagram appearing in the upper right

indicates the superficial branchial muscles in the floor of the oral cavity that have been incised and reflected.

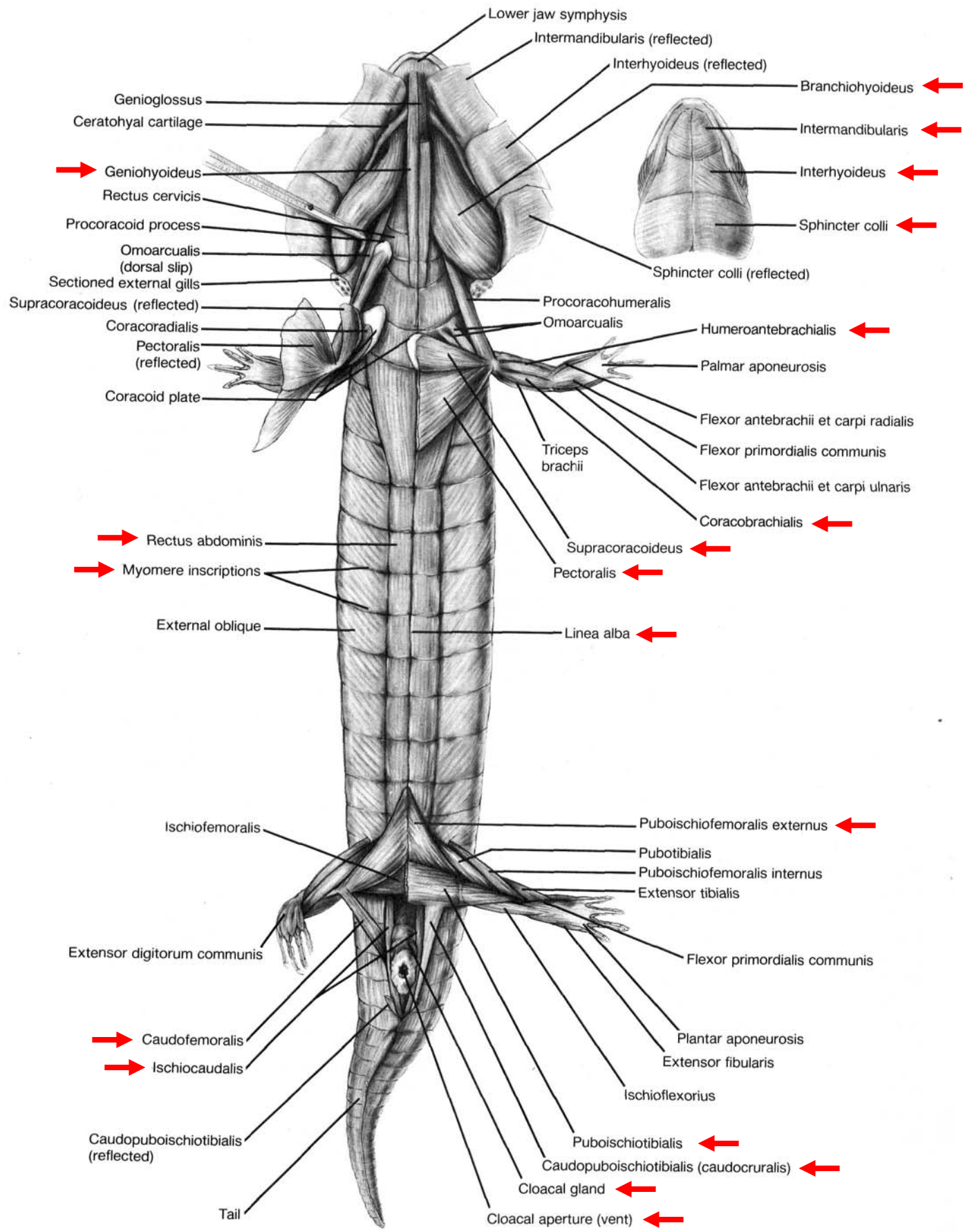


Figure 2.3 Dorsal and caudal views of the skull. Cartilage is indicated in stipple: the dot pattern denotes the chondrocranial components, while the line pattern denotes splanchnocranial components.

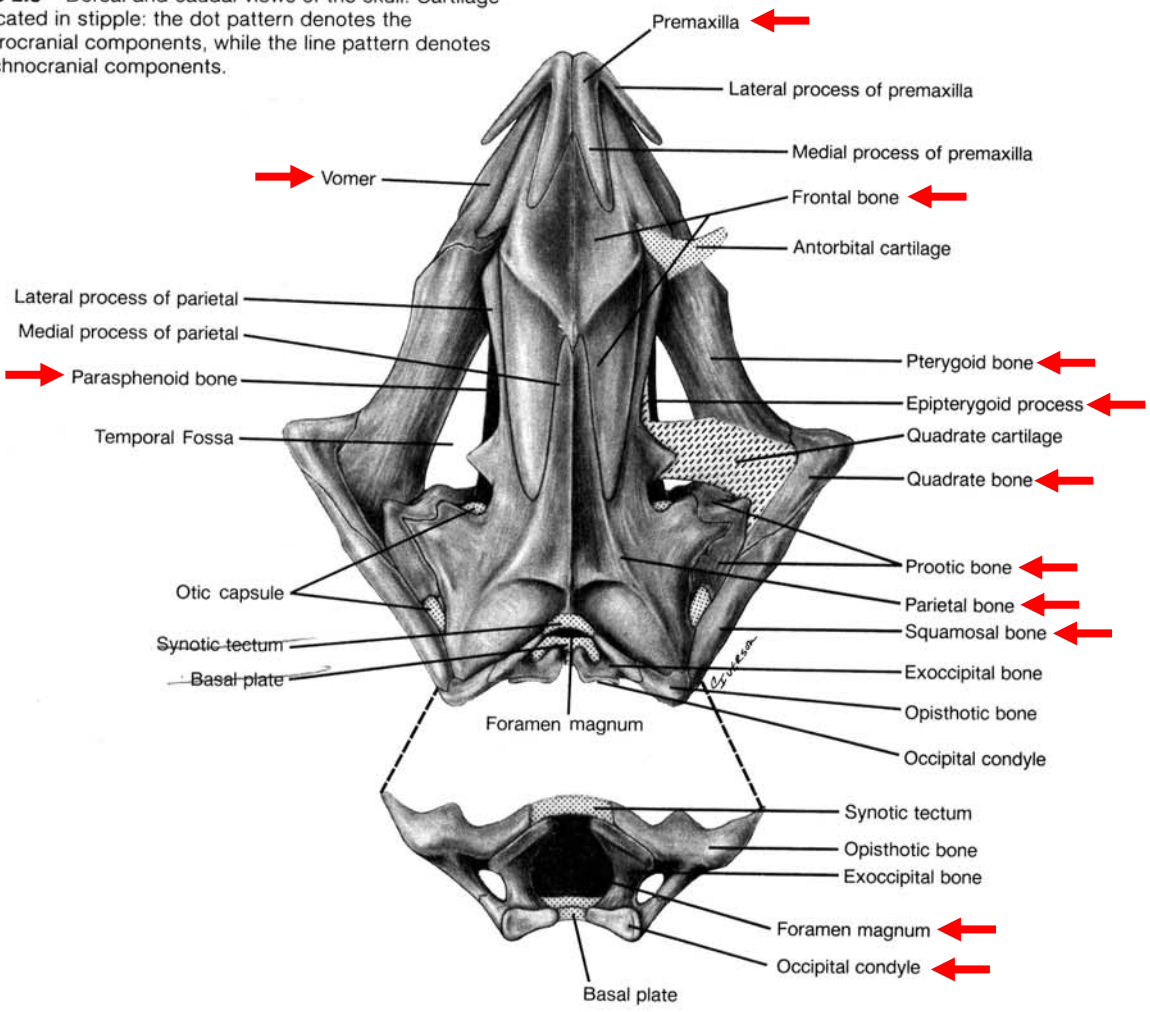


Figure 2.4 Ventral view of the skull. Cartilage is indicated in stipple: the dot pattern denotes the chondrocranial components, while the line pattern denotes splanchnocranial components.

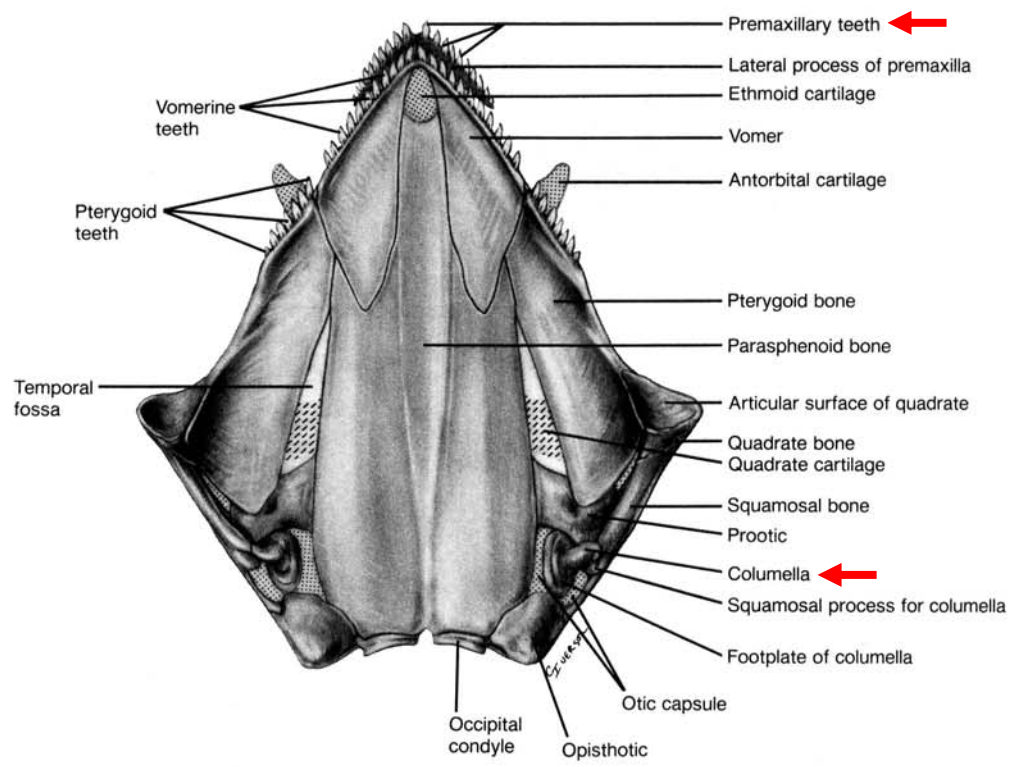


Figure 2.7 The lower jaw and branchial apparatus: (a) dorsal view of the lower jaw; (b) ventral view of the branchial apparatus; (c) medial view of the lower jaw; and (d) lateral view of the lower jaw. Splanchnocranial cartilage is indicated in stipple.

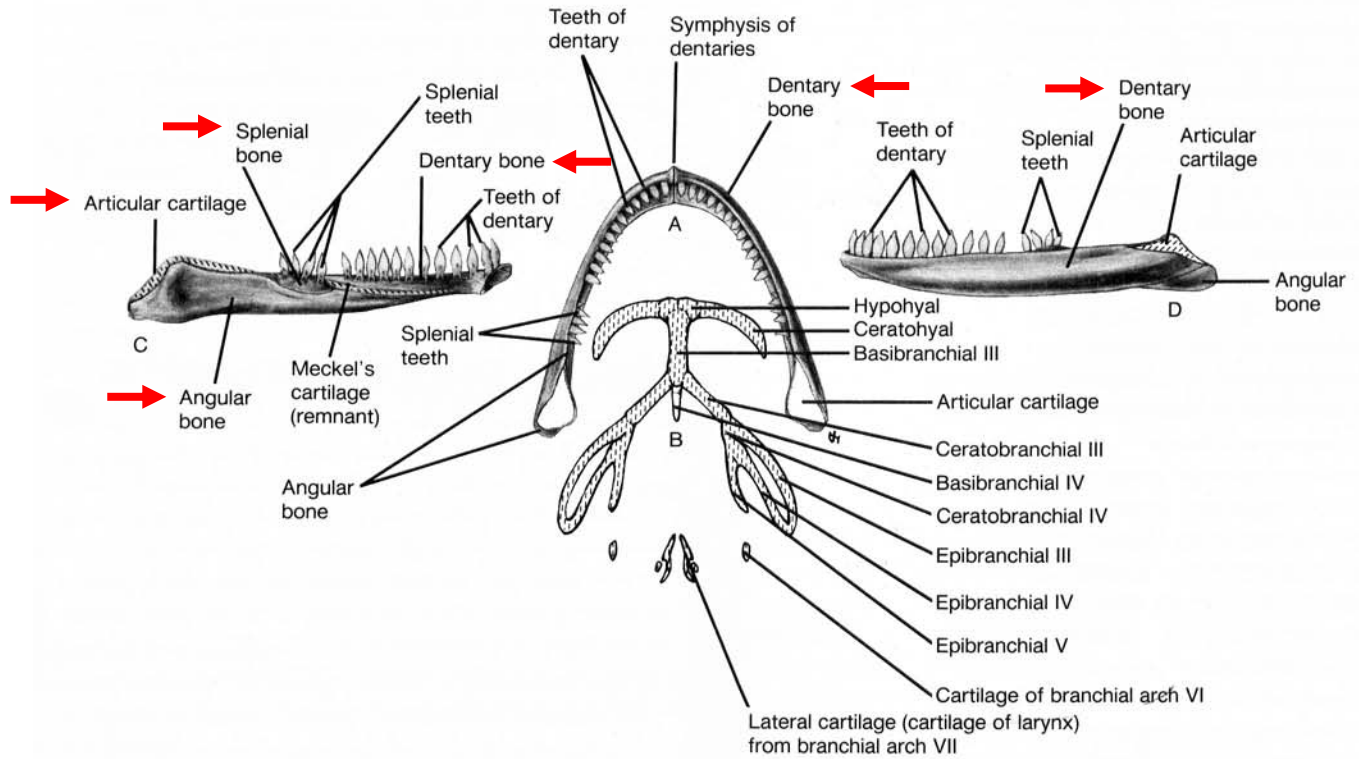


Figure 2.5 Lateral view of the skull and branchial apparatus. Cartilage is indicated in stipple: the dot pattern denotes the chondrocranial components, while the line pattern denotes splanchnocranial components.

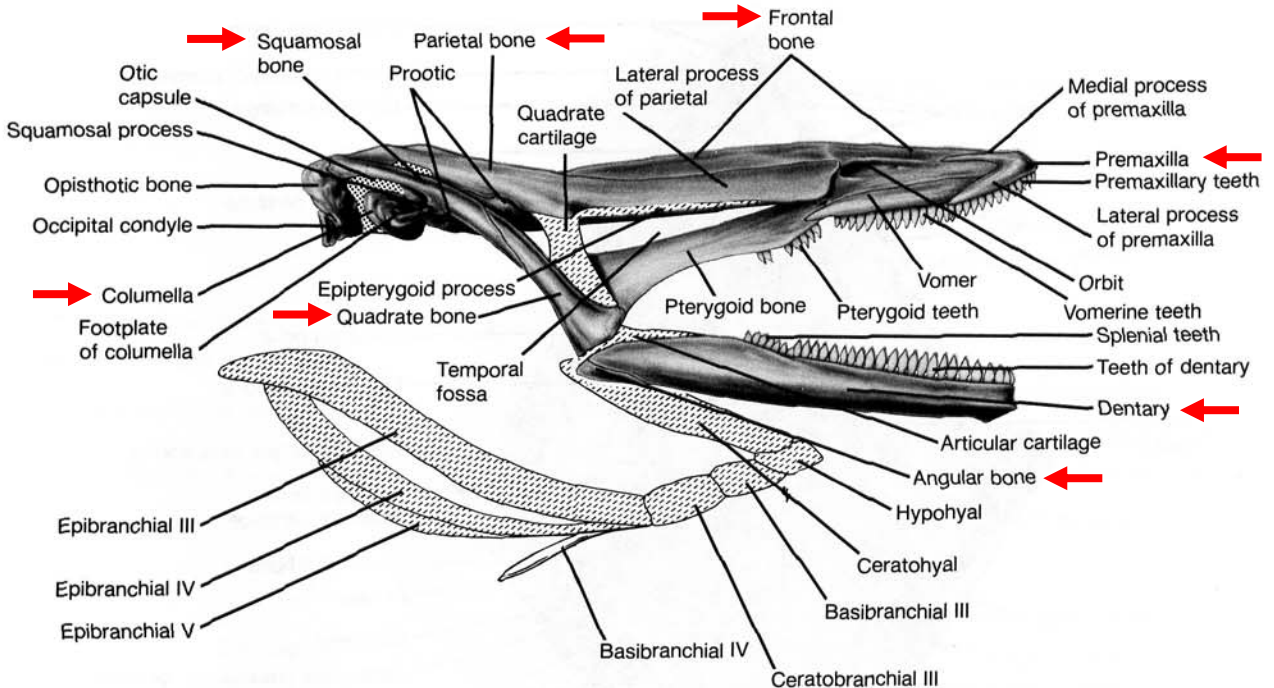


Figure 2.1 Dorsal view of the skeleton of *Necturus maculosus*.

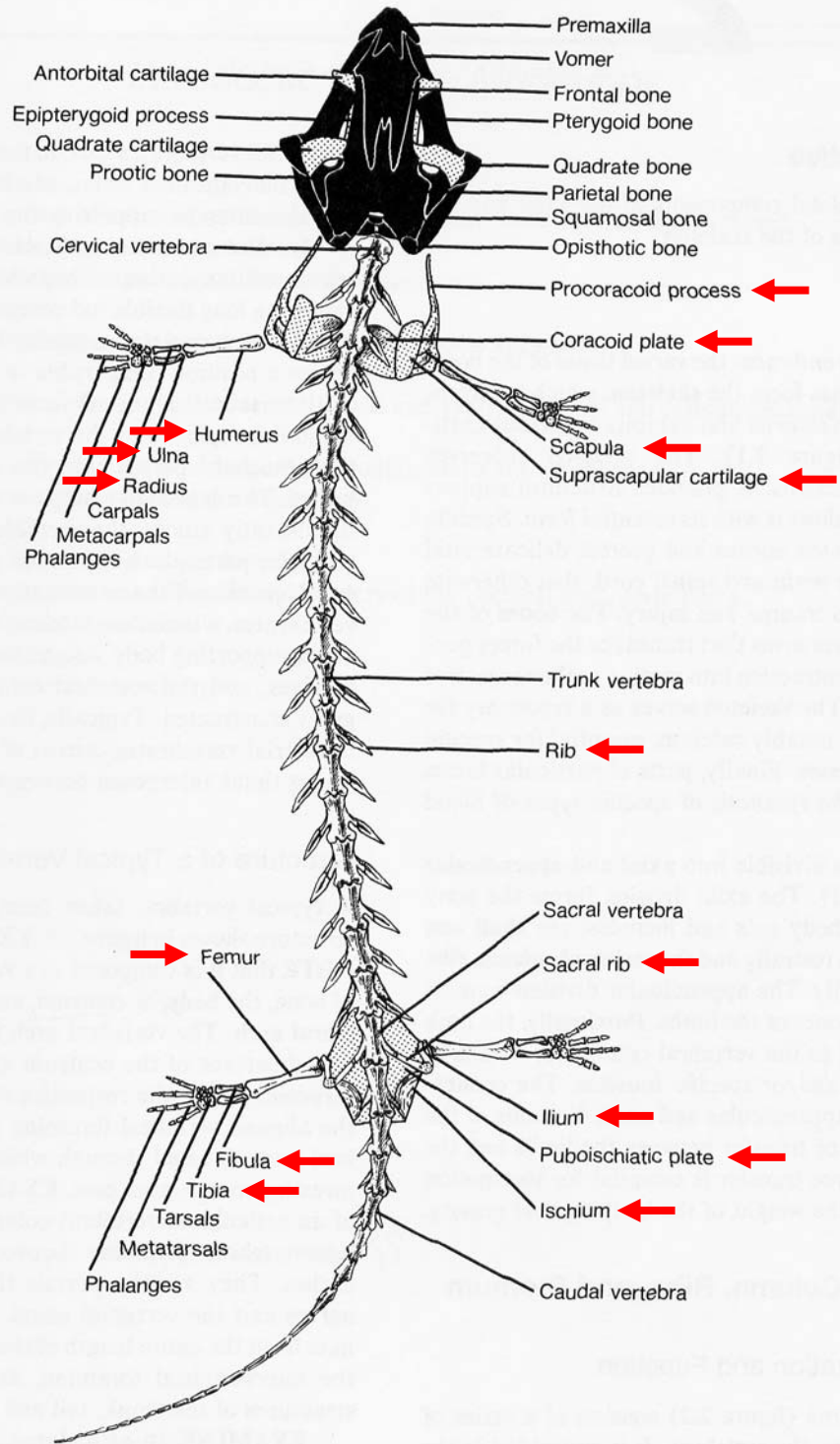
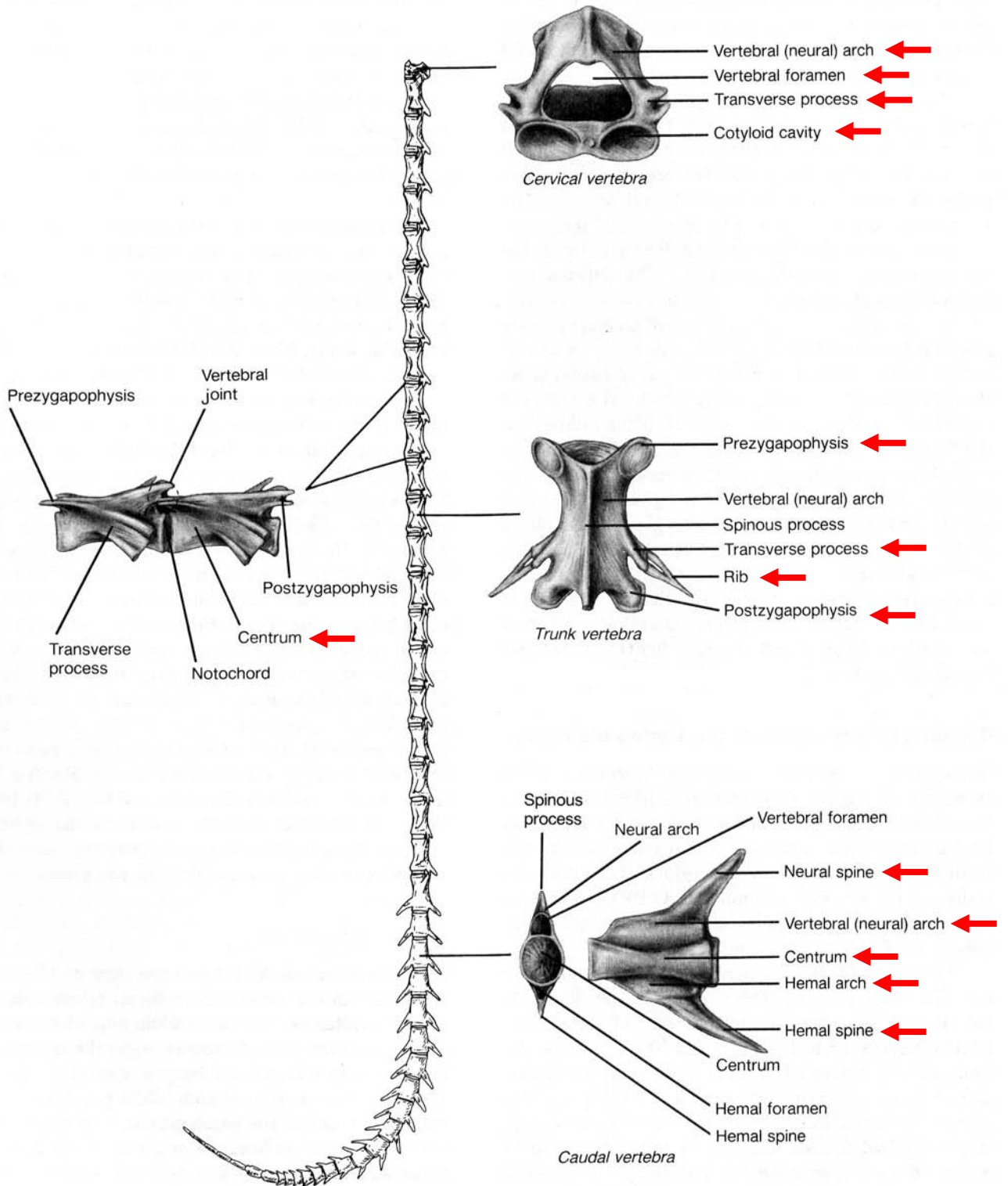


Figure 2.2 Lateral view of the vertebral column. The structure of particular types of vertebrae are shown on either side of the column.



Be able to do or answer all of the following:

1. List the functions of the skeleton.
2. Distinguish between the axial and appendicular divisions of the skeleton. What are the osseous components of each division?
3. Sketch and label the parts of a typical trunk vertebra.
4. What kind of centrum does *Necturus* possess? Why is it so designated?
5. List the regions of the vertebral column of *Necturus*. How many vertebrae are present in each region?
6. What are chevron bones?
7. How many heads does a rib have? How are these designated?
8. Sketch and label the dorsal surface of the skull.
9. Sketch and label the ventral surface of the skull.
10. List the constituent bones of the lower jaw.
11. Sketch and label the parts of the chondrocranium and indicate the bones that ossify within them.
12. What is the columella and what are its attachments?
13. What is a platybasic skull configuration?
14. What does the term "pleurodont" refer to?
15. What are the choanae? Where are they located?
16. Sketch and label the components of the branchial apparatus.
17. List the components of the pectoral girdle.
18. What is the phalangeal formula of the pectoral limb?
19. What is the puboischiatic plate?
20. How does the pelvic bone articulate with the vertebral column?
21. Sketch and label the skeletal elements of the pectoral limb.
22. Sketch and label the skeletal elements of the pelvic limb.