

Amphibia



Webbing

Skeletal system

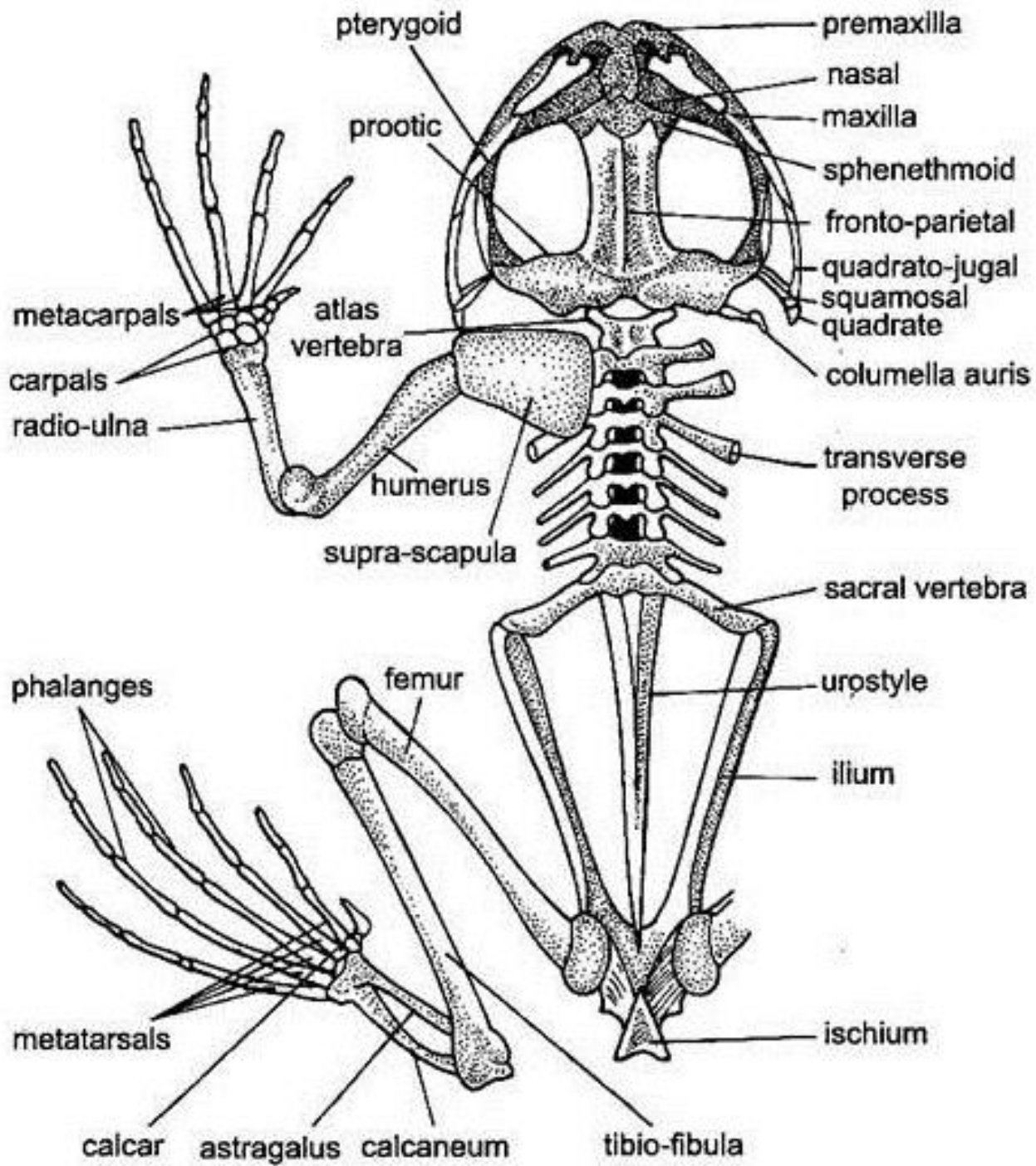
- The skeleton that supports the soft parts lies internally and is designated as the endoskeleton. It is chiefly made of bones and cartilages.
- **The endoskeleton is described under two broad heads:**
 - (i) The axial skeleton and
 - (ii) The appendicular skeleton.

- (i) The axial skeleton

The axial skeleton comprises the skull and vertebral column.

- (ii) The appendicular skeleton.

The appendicular skeleton consists of pectoral and pelvic girdles, and the skeleton of paired limbs.



Axial Skeleton

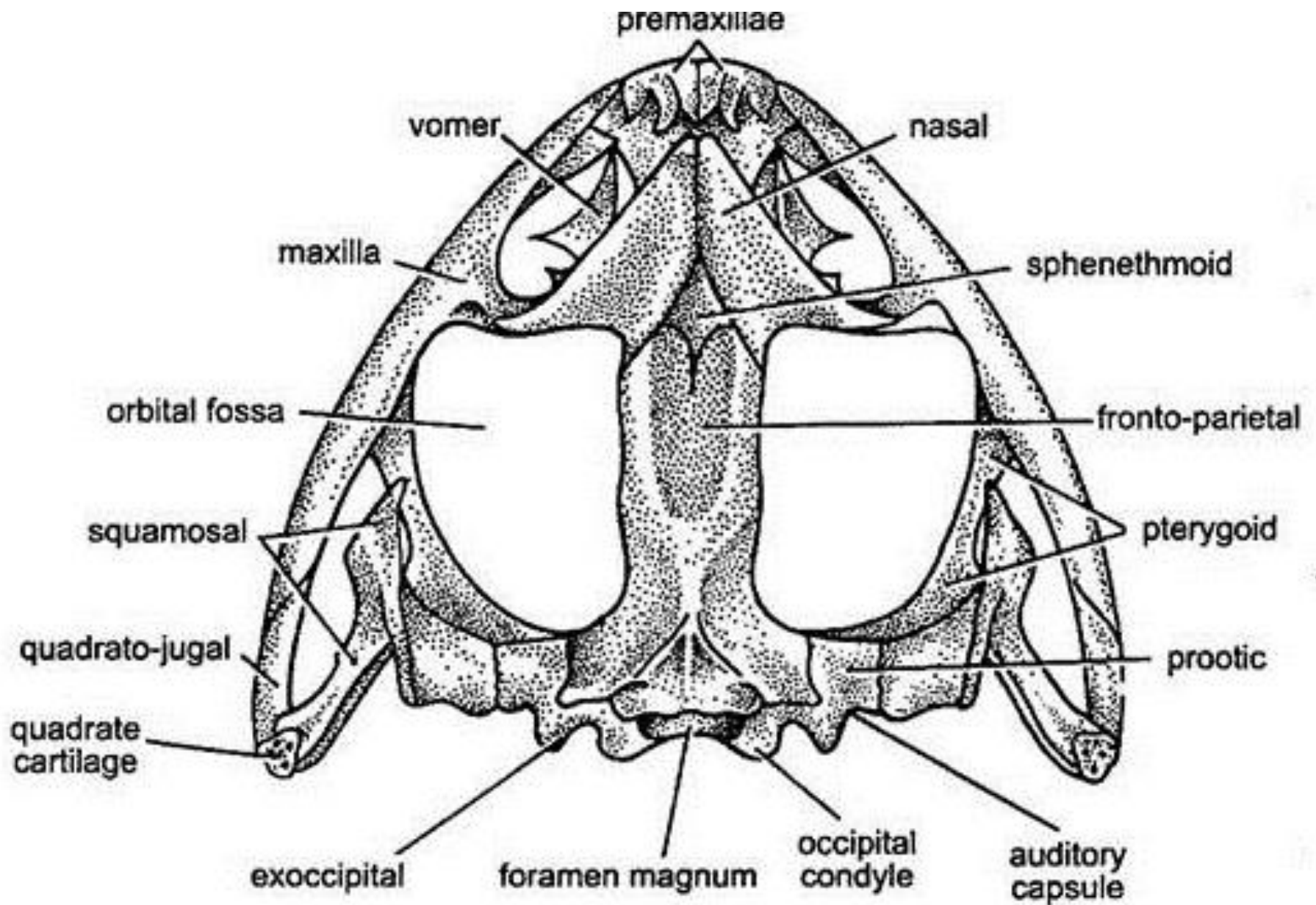
1. Skull

- The skull of frog is broad and flat and consists of a narrow cranium or brain box, paired sense capsules, the jaws and hyoid apparatus

Cranium:

- The cranium is the narrow cavity lodging the brain, hence, it is also called brain box. The cranium is formed of six bones – a pair of exoccipitals, a pair of frontoparietals, a parasphenoid and a sphenethmoid.

- In the front part of the cranium is a sphenethmoid enclosing the forebrain and olfactory sacs
- Skull is divided by a transverse partition into an anterior ethmoidal region and a posterior sphenoidal region which encloses the forebrain.
- The ethmoidal region encloses the olfactory sacs.
- Sphenethmoid is only exposed laterally.
- It is dorsally covered by a pair of nasals and a fronto-parietal except a small diamond-shaped area.
- It is ventrally covered by a dagger-shaped parasphenoid.



Occipital Segment

- At the posterior end of the cranium is a foramen magnum surrounded by two exoccipitals.
- Each exoccipital bears at its posterior end a convexity, the occipital condyle which articulates with the concavity of the atlas vertebra.

- The auditory capsule is fused on the outer side of each exoccipital.
- Each auditory capsule has a protuberance in front, the capsule has an aperture, the fenestra ovalis into which a cartilaginous stapedial plate fits.

Olfactory Capsules:

- The olfactory capsules have two nasals dorsally and two vomers ventrally, the vomers bear vomerine teeth.
- A pair of special bones called septomaxillary (ethmoids) form the boundary of nostrils.
- They are associated with and surround the Jacobson's organ.

Optic Capsules:

- They enclose the eyes and are not fused with the skull.

Upper Jaw

- The upper jaw has two halves, each half has an anterior premaxilla followed by a long maxilla, both bear teeth. The posterior part of the upper jaw has a small quadratojugal. Its broad posterior end unites with quadrate cartilage.