

E Content for student of Patliputra University, Patna

B.Sc. Part II Paper –III

Subject:- Zoology Hons.

Topic:- Describe the biting and feeding mechanism of snake

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Q. 2. Describe the biting and feeding mechanism of snake.

Ans. Biting Mechanism : The mechanism of biting is a complicated process and it can be described in the following three steps.

(i) Opening of the mouth : By the contraction of digastric muscles the mouth is opened.

(ii) Rotation of maxilla : As the mouth opens the lower jaw moves forward and a rotation of the squamosal, quadrate and mandible in relation to each other occurs. Now the sphenopterygoid muscles contract. This contraction results in the forward movement of pterygoid and up-pushing of the ectopterygoid. The upward movement of the ectopterygoid brings about a rotation of maxilla on its own axis found the lacrymal and as a result the fang is raised and becomes directed forward. The fangs is nearly horizontal in position when the mouth remains closed. But during opening of the mouth to bite, the fang assumes almost vertical position.

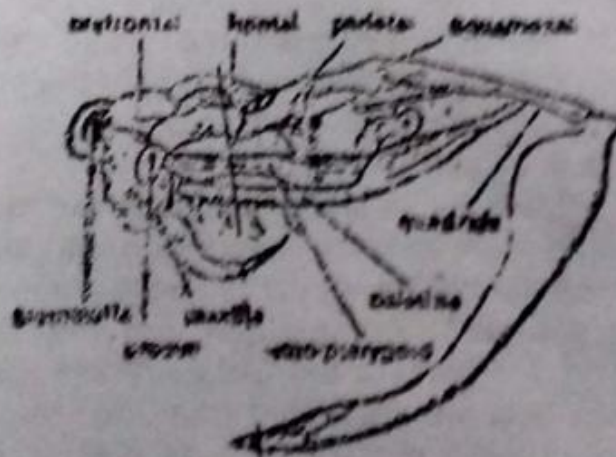


Fig. Skull of rattle snake with jaws partly opened

(iii) Closing of Mouth : The closing of the mouth is brought about by the contraction of the temporalis and sphenopterygoid muscles. The point of fang is directed backward while the mouth is closed. It takes longer time to open the mouth than to close it.

Transference of Venom : During the contraction of the digastric muscle the posterior ligament is relaxed and during the rotation of the squamosal bone the fan-shaped ligaments are stretched to squeeze the wall of the poison gland. This makes the poison to come out of the poison gland through this poison duct and the fang.

Swallowing Mechanism : The rami of the lower jaw are separate in front but are connected by an elastic ligament which allows them to come apart. The upper jaw is loosely attached to the skull. A long quadrate articulates.

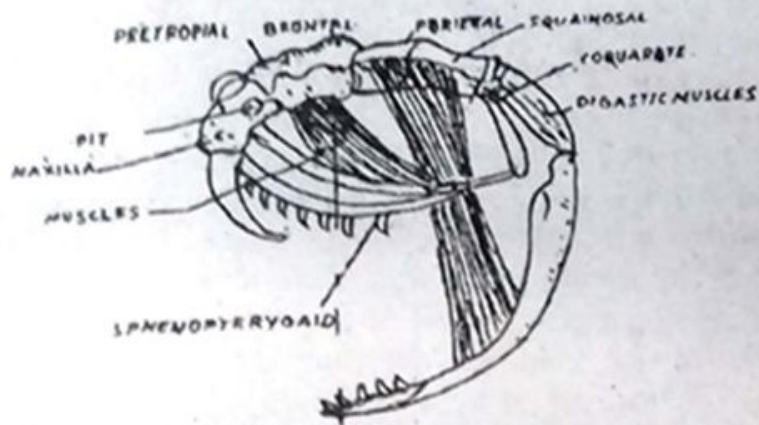


Fig. Skull of rattle-snake with its jaw fully extended

movably with the squamosal forming a liver which when straightened, separates the lower jaw from the base of the skull, thus the mouth and throat are opened so wide that the snake can swallow very animals, swallowing is done very slowly and to enable breathing, the glottis is pushed forwards between the two rami of the lower jaw. Absence at pectoral girdle and sternum is an aid to swallowing large animals.