

MORPHOLOGY OF THE TONGUE OF INDIAN TIGER (*PANTHERA TIGRIS TIGRIS*)

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The literature on the anatomical aspects of the tongue of adult Bengal Tiger is limited. Therefore, an attempt was made to elucidate the morphological features of the tongue of an adult Bengal Tiger.

Following the death of an 18 years old male adult white Bengal Tiger 'Kashyap' in the Assam State Zoo on 22 June 2003 evening, the tongue was collected from the carcass at the time of post mortem. Subsequently, the tongue was cleaned properly, its gross features and the morphological measurements were recorded with the help of measuring tape and Vernier calipers.

The tongue of white adult Bengal tiger was a mobile organ and situated on the floor of the oral cavity in between the two rami of the mandible. It was an elongated muscular organ which extended from its attachments on the basihyoid bone with its tip at the level of the incisors as was reported on the tongue of goat (Sarma *et al.*, 1995). The tongue of white Bengal Tiger was spatula shaped as in horse (Sisson, 1975) and was 27.4 cm long. It had three parts viz. root, body and apex. The apex was thin being 0.46cm in thickness and was rounded. It became thick and massive towards the root 2.62cm at the middle and 3.34cm at the root. A similar finding was also reported in lion by Bhardwaj *et al.* (2000). It was cream in colour and attached to the floor of the mouth ventrally by a well developed frenulum linguae. Lyssa was absent on the ventral aspect of the tongue.

The dorsum linguae of the tongue unlike the ventral surface was very rough owing to the presence of different types of papillae as was observed in bear (Sarma *et al.*, 1994). It was divided into two lateral halves by a median groove (Image 1) which extended from the tip of the tongue to the root which was in contrary to the reports of Chibuzo (1979) in dog, who stated that the median groove extended from the teeth upto the level of caudal pair of circumvallate papillae. The groove was shallow at the rostral half and deep at the caudal half.

Filiform papillae were most numerous on the dorsum linguae as in dog (Chibuzo, 1979) and were rasp like. At the rostrum most part of the tip, i.e., upto 1.5cm from the tip, filiform papillae were not rasp-like but fine and were velvety in appearance (Image 1). Such fine papillae were also present on the lateral surfaces of the rostral 1/3rd of the tongue but absent on the ventral surface as reported in Lion (Bhardwaj *et al.*, 2000). The size of the filiform papillae were almost same and directed caudally as in cat (Nickel *et al.*, 1979).

Fungiform papillae were very scarce on the dorsum linguae of the tongue and interspersed between the filiform papillae in the rostral 2/3rd of the dorsum as was observed in Lion (Bhardwaj *et al.*, 2000).

Conical papillae were present on the caudal 1/4th of the dorsum of the tongue as was reported in dog by Ellenport (1975) and Chibuzo (1979). This was not in accordance with the report of Nickel *et al.* (1979) in dog who stated that long and soft filiform papillae were present at the root of the tongue of carnivores and pig.

Foliate papillae were absent which was not in accordance with the findings of Chibuzo (1979) in dog, Nickel *et al.* (1979) in cat and Bhardwaj *et al.*, (200) in Lion.

Circumvallate papillae were present on the caudal third of the dorsum. They were five in number, two on the right side and three on the left of the median groove arranged in the form of 'V', the point of 'V' being directed caudally (Image 2). However, Bhardwaj *et al.*, (2000) reported that in lion four pairs of papillae were present arranged in the shape of the letter 'V'.

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