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Director, Wildlife Institute of India

MACROMORPHOLOGY OF HARD PALATE OF ADULT WHITE BENGAL TIGER (*PANTHERA TIGERS TIGRIS*)

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web supplement

A male adult white Bengal Tiger *Panthera tigris tigris* "Kashyab" aged 18 years died due to old age at the Assam State Zoo, Guwahati on 22 June 2003. Following postmortem examination, the hard palate was studied *in situ*.

Hard palate, the mucosal covering of the osseous palate, the roof of the oral cavity of the tiger was nearly flat, nonpigmented and was bounded laterally and rostrally by the upper dental arch. It was continuous laterally with the mucous membrane with the gums and caudally with the soft palate. Median palatine raphae was absent in the tiger unlike dog (Nickel *et al.*, 1979) who possesses indistinct palatine crest.

Palatine ridges numbering eight pairs are transversally oriented in the hard palate of the tiger, 6-10 pairs in dog and seven pairs in cat (Nickel *et al.*, 1979). The ridges were cornified. The first four pairs of palatine ridges in the tiger were semicircular. Caudally, 5th, 6th and 7th pairs (Image 1^w) of ridges were distinctly concave caudally while the last or 8th pair was transversely placed being 1.73cm in length. There were rows of papillae on either side being rostral and caudal to the palatine ridges as in cats (Nickel *et al.*, 1979). Elleport (1975) suggested that there were 7-9 curved ridges in cats and papillae were present in the grooves between the ridges. The incisive papilla was present just caudal to the central incisors which was rhomboid in shape with an average width of 0.8cm. Incisive ducts opened on either side of the incisive papilla in tiger similar to dog and cat (Nickel *et al.*, 1979). Close examination of the palatine ridges revealed presence of small blunt eminences caudally directed as in dog (Evans & Christensen, 1979).

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^w see image 1 in the web supplement at www.zoosprint.org



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