

# Studies of the Major Respiratory Pathways of the West African Guinea Fowl (*Numida meleagris galeata*): the Morphometric and Macroscopic Aspects

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### Abstract :

Morphometric and macroscopic studies were carried out on the respiratory system of the West African guinea fowl (WAGF). The gross anatomical study revealed that the laryngeal mound of the guinea fowl was roughly triangular in shape extending rostrally from the base of the skull and continues caudally as the trachea. It had only one row of caudally pointing papillae. The larger cartilaginous rings of the trachea bifurcated at the ventrum while the smaller cartilaginous rings did not bifurcate. The investigation also revealed that the lung of the adult guinea fowl had the shape of a trapezium. The morphometric result obtained revealed that the mean ( $\pm$ SE) life weights of the male and female adult guinea fowls were 1.357kg and 1.225kg, respectively. The mean ( $\pm$ SE) weights of the respiratory system were 9.638g and 8.500g for male and female birds respectively. The mean ( $\pm$ SE) lengths from the thoracic inlet to the tracheal bifurcation for male and female birds were 3.26cm and 4.40cm, respectively. The male guinea fowl was significantly heavier ( $p < 0.05$ ) than the female, but there was no significant difference ( $p > 0.05$ ) in the mean weights of the respiratory system of the male and female birds. The analysis also showed that the length of the thoracic inlet to tracheal bifurcation for female adult guinea fowl was significantly longer ( $p < 0.05$ ) than that of the male bird.

### Key Word :

Morphometric, macroscopic, respiratory pathways, guinea fowl