

Forensic Identification of Suspected Poached Wild Boar (*Sus scrofa affinis*)

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Abstract: A case of suspected wild boar death due to dynamite blast by poachers was received by us for confirmation. The skin sample was collected and examined histologically for identification based on hair follicle arrangement in the horizontal section of skin. The horizontal sections of skin from both domestic and wild boar was stained in order to study the distribution of hair follicles. Linear arrangement of hair follicles comprising three primary follicles in a row was observed in both domestic and suspected wild boar. Based on circumstantial evidence it was concluded that it may be belonging to wild boar.

Keywords: Forensic identification, wild boar, poaching, histology, hair follicle arrangement.

INTRODUCTION

Poaching of wild pigs is carried for human consumption, as a hunting hobby, making ornaments etc. Since, these wild boars come under category of threatened species vide wild life protection act, 1972. A case of poached suspected wild boar carcass was presented by the forest personnel to Veterinary Dispensary to investigate whether suspected poached boar carcass belonged to domesticated or wild. Therefore the present study was undertaken to identify the suspected wild boar carcass.

The suspected wild boar was poached in the mountain region and the carcass on examination, the upper jaw was completely absent and the snout region was completely charred including tongue (Figure 1). The forest personnel reported that the poachers might have used meat of other animal as a bait to attract the wild boar and in the meat they might have placed the dynamite. The wild boar when tried to consume the meat the dynamite blasted, resulting in detachment of upper jaw from the body and charring of the tongue and snout region. On gross examination, both the thoracic and abdominal cavities were opened (Figure 2) and all visceral organs were eviscerated (Figure 3). Even, Singeing of hairs on the entire body was carried out. The spices along with turmeric powder was smeared on the entire body because of this carcass was appearing yellowish.



Figure 1: The suspected wild boar carcass in which the upper jaw was absent and the snout region was completely charred (indicated by arrow). Singeing of hairs was carried throughout the body.

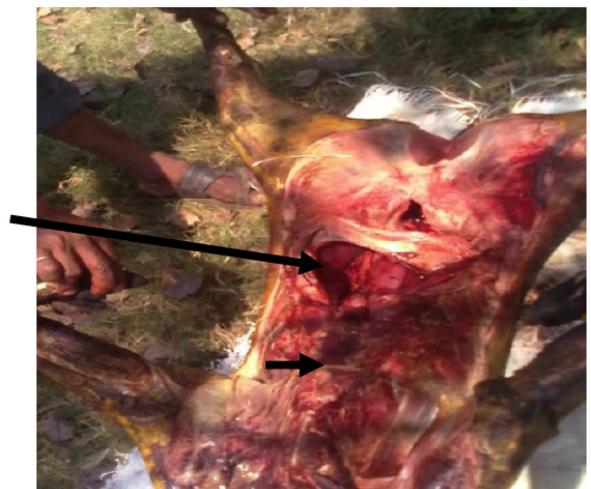


Figure 2: Thoracic (indicated by arrow head) and Abdominal cavities (indicated by arrow) were opened and evisceration of organs was done.

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Figure 3: Eviscerated visceral organs (indicated by arrow) from suspected wild boar carcass.

RESULTS AND DISCUSSION

Manually the skin samples from the lateral abdominal region of suspected wild boar was collected and cut into 2×2 cm size and fixed in 10% Neutral Buffered Formalin for a minimum of 48 hours. Simultaneously, skin sample from domestic boar was collected from local slaughter house and processed for histological study. Then, the fixed skin samples were washed in running water for overnight and to smoothen the skin it was immersed in 6 % phenol aqueous solution [1] for 8-10 days. Further, the skin sample was processed for the routine histological technique. 6 μm thick horizontal sections of skin were cut. The horizontal sections of the skin were stained with H&E Phloxine [2] to study the distribution of hair follicles.

The arrangement and distribution of hair follicles in skin are characteristic to the species specific both in domestic and wild animals [3]. The skin histology of suspected wild boar showed linear arrangement of hair follicles comprising three primary follicles in a row (Figure 4). At the same time skin sample from the domestic pig collected from local slaughter house was also processed to study hair follicle distribution. The hair follicle arrangement was similar in both domesticated (Figure 5) and suspected wild boar skin. However, based on the circumstantial evidence, poaching of the boar in the mountain region, killing the boar by dynamite blast and observation of the yellowish coloration of carcass (because of Spices stuffed along with turmeric powder on entire body) it was concluded that it may be belonging to wild boar. However, molecular methods such as DNA profile may further

help in confirmation and identification of the suidae family- whether wild or domesticated.

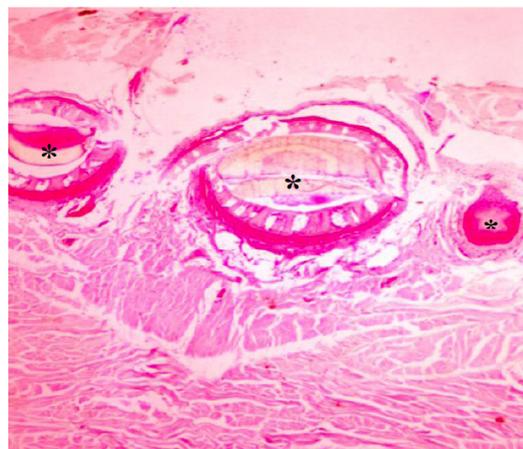


Figure 4: Histology of wild boar skin showing linear arrangement of three primary hair follicles in a row (* indicates primary hair follicle) H&E, 100X.

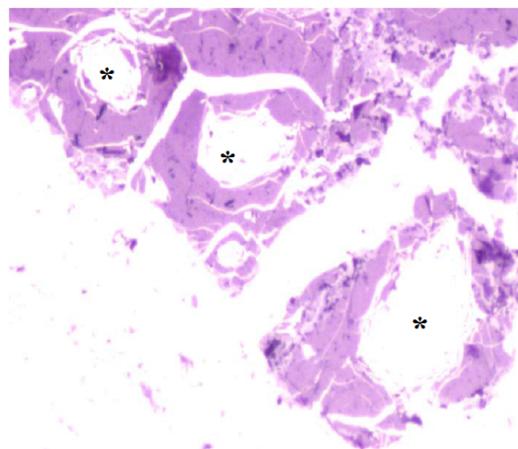


Figure 5: Histology of Domestic pig skin collected from local slaughter house, showing linear arrangement of three primary hair follicles in a row (*indicates primary hair follicle) H&E 100X.

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