



A Morphological Hermaphroditic behavior for the first time reported in Domestic goat (*Capra aegagrushircus*) in Sunigram Valley district Buner, KP Pakistan

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Abstract-The objective of the research work was to observe the rarely seen behavior in morphological domestic Goat (*Capra aegagrushircus*) have hermaphroditic condition. This case has been reported in a domestic goat (*Capra aegagrushircus*) having age of 3.5 years from Sunigram valley district Buner KP. The reported species having both male and female characters. The pictures have been taken from the reported species and shows clearly both male and female organs. This type of case has been reported for the first time from Pakistan. The male characters observed are having testes and scrotum. The neck morphology shows male character. The body is stout. Snout shape shows male character. Eyes show male character. The tail is erect above this also shows male character. Having a long beard. The hairs on front legs show male character. Hairs on the neck show male character. The male goat teasing the female goat but cannot mate. The female characters observed having Ears are elongated and suspended. Having two teats (mammary glands) and vagina. The belly has slope shape. Nose shows female character. Breast shows female character. Mouth is broad and shows female character. It is useful information for the Geneticists in future study.

Keywords: Domestic goat, Hermaphrodite, Buner, Pakistan

I. INTRODUCTION

Livestock plays an important role in the economy of the country and contributed approximately 55.1 percent of agriculture value added and 11.5 percent to national GDP [1]. The goat is a member of the family Bovidae and is closely related to the sheep as both are in the goat-antelope subfamily Caprinae [2]. Goats are one of the oldest domesticated species, and have been used for their milk, meat, hair, and skins over much of the world [3]. In 2011, there were more than 924 million live goats around the globe, according to the UN Food and Agriculture Organization [4]. Goats were among the first farm animals to be domesticated. As indicated by the archaeological evidence, they have been associated with man in a symbiotic relationship for up to 10,000 years [5]. Goats are mainly kept: to produce milk, meat or fiber (Mohair and Cashmere). The role of livestock in the rural economy may be realized from the fact that 30-50 million rural population is engaged in livestock raising, having household holdings of 2-3 cattle / buffalo and 5-6 sheep / goats per family which help to drive 30-40 % of their income from it. According to the Economic Survey of Pakistan 2010-11, the population of goat stood at 61.5 million. Mutton production is mainly contributed by sheep and goat that accounts 616 thousand tons in Pakistan. Goats are mostly raised for income and employment to a predominantly poor population [6]. Goats annually contribute approximately 759,000 tons of milk, 2,685 million skins and 23.2 thousand tons of hairs to the national economy (Economy Survey 2010-2011). It is also a source of foreign exchange and contributes 2.5 % of the annual milk production [7].

Taxonomy of Domestic goat

Kingdom: Animalia

Phylum: Chordata

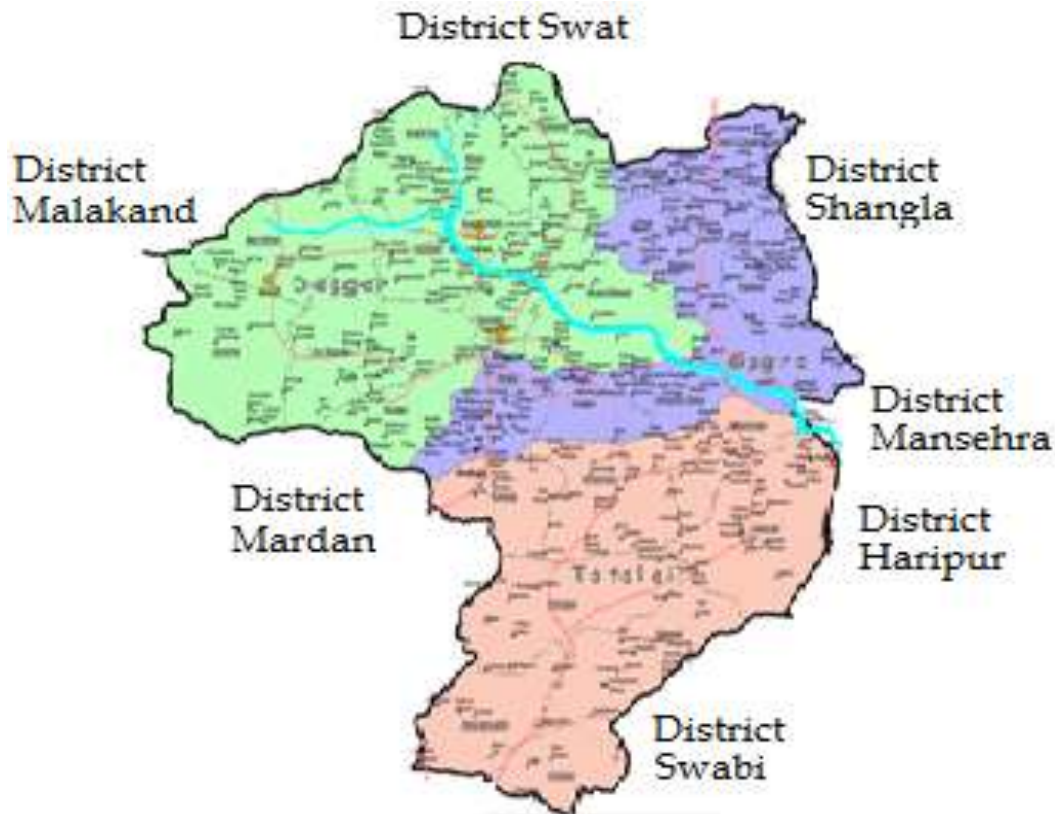
Class: Mammalia
Order: Artiodactyla
Family: Bovidae
Subfamily: Caprinae
Genus: Capra
Species: C. aegagrus
Subspecies: C. a. hircus



Figure 1. Picture of the reported Goat (*Capra aegagrushircus*)

II. MATERIALS AND METHODS:

Buner is a district of Malakand division. It consists of Tehsil Daggar, Gagra, Mandan, Chagharzi, Khudokhail and Gadeze. The Daggar is the head quarter of the district Buner lies between 34-09 and 34-43° N latitude and 72-10 and 72-47° E longitude. It is bounded on the north by Swat District, on the west by Malakand agency, on the south by Mardan District, and on the east by river Indus and Hazara division. Elevation varies from 1200 ft in Totalai in the south to 9,550 ft of Dosara peak [8].



Buner Map (Saeed et al, 2015)

III. RESULTS:

Male Characters:

1. Having testes and scrotum.
2. The neck morphology shows male character.
3. The body is stout.
4. Snout shape shows male character.
5. Eyes shows male character.
6. The tail is erect above this also shows male character.
7. Having a long beared.
8. The front legs shows male character.
9. Hairs on the neck shows male character.
10. Hairs on the legs shows male character.
11. The male goat teasing the female goat but cannot mate.

Female Characters:

1. Ears are elongated and suspended.
2. Having two teats.
3. Having vagina.
4. Penis is absent.
5. The belly has slope shape.
6. Nose shows female character.
7. Chest shows female character.
8. Mouth is broad and shows female character.
9. Urinary system is in back side and urine excrete on vagina.

Pictures of the reported species



Figure 2: Shows both Testes and Teats



Figure 3: Shows Testes (Male reproductive organs)

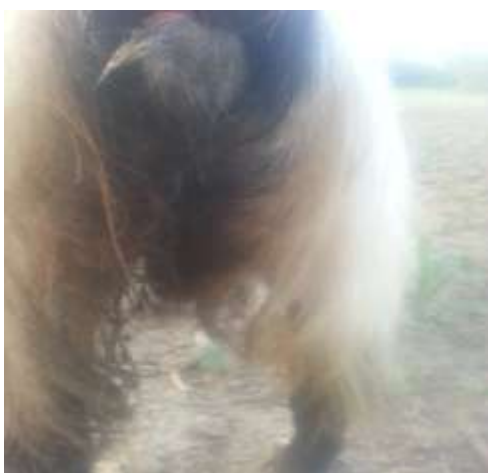


Figure 4: Shows Female reproductive system (Vagina)



Figure 5: Shows Tail (Male) and Vagina (Female)



Figure 6: Shows Chest (Female), Belly (Female), Testes (Male) Figure 7: Shows Ears (Female), Eyes (Male) Snout (Male)



Figure 8: Shows elongated body structure of reported species

IV. HISTORY:

The reported species having both male and female characters.

The age of observed species is 3.5 years.

The parents were normal and having no genetically disorder.

By birth two were female goats and one is hermaphroditic.

V. ACKNOWLEDGMENT.

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CONFLICTS OF INTEREST.

The authors declare no conflict of interest.

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