

Wildlife Conservation



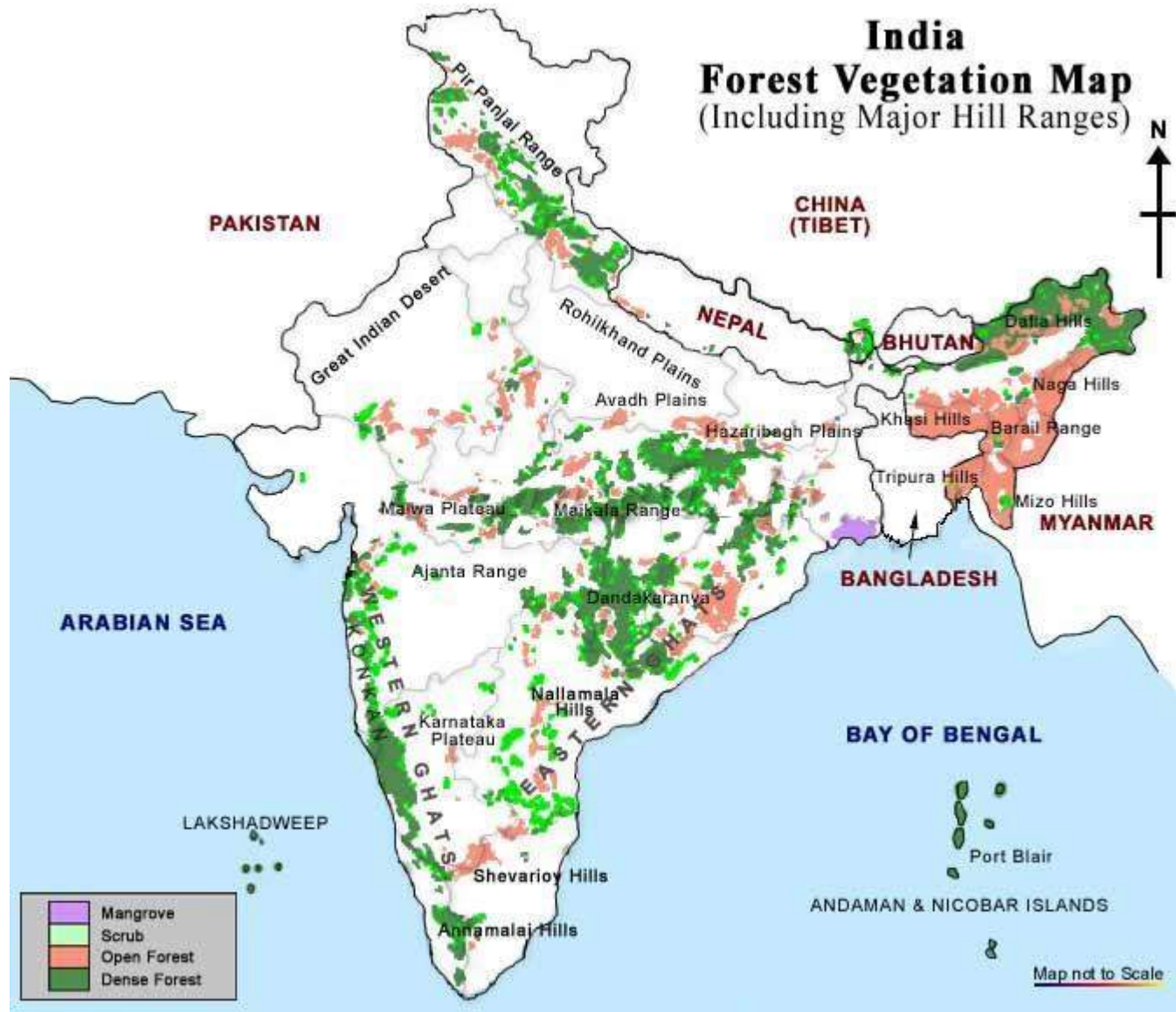
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(Wildlife)



India

Forest Vegetation Map

(Including Major Hill Ranges)



Forest Map of Madhya Pradesh

Neighboring States: Rajasthan, Uttar Pradesh, Gujarat, Maharashtra

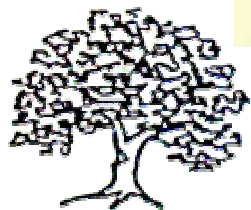
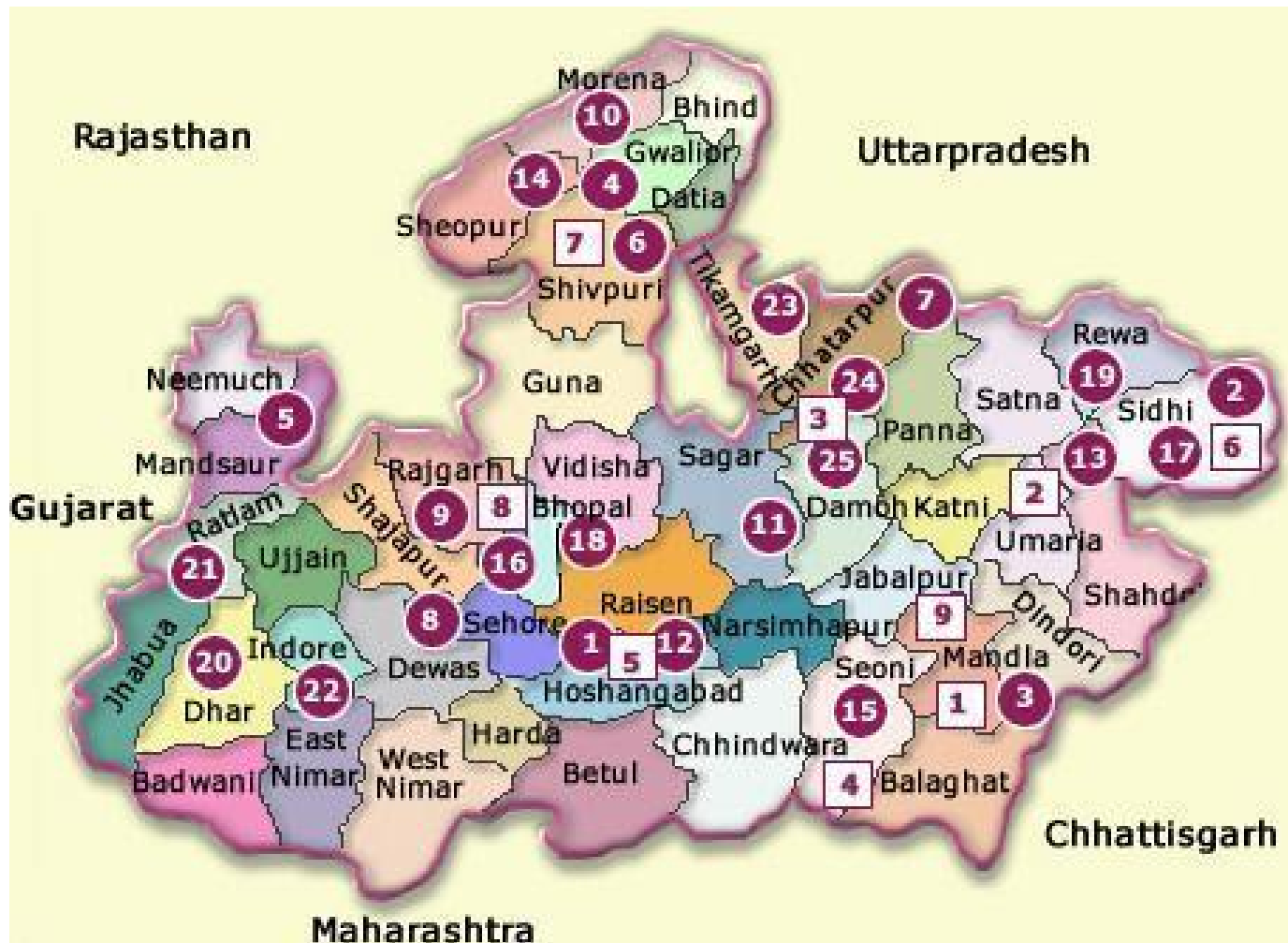
Legend:

- State capital (Bhopal)
- State Boundary
- Dense Forest (Green)
- Open Forest (Yellow)
- Scrub (Red)

Map not to Scale

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Wild Animal Evidences

- **Direct Sighting-----No Ifs and Buts**

(You can photographs or note down information required)

- **Indirect Evidences**

- Animal foot/ pug marks
- Droppings/ Urine/ Scent marking
- Feeding signs
- Shelters/ Nests
- Mud wallowing/ rolling
- Tree scratching/ Bark Stripping
- Shed Hair/ Skin/ feathers
- Saltlick gathering
- Biting / hunting pattern/ browsing/ Grazing
- Others-----





Indirect Evidences

Animal foot/ pug marks

Droppings



Pug Marks



Pugmarks without claws



Pugmarks with claws



Hands & Feet



Cloven Hoofs



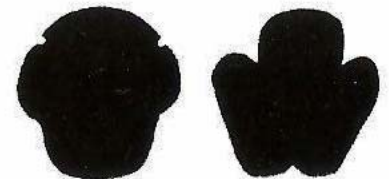
Non-Cloven Hoofs



Big Game



Elephant



Rhino

PUGMARKS WITHOUT CLAWS

Tiger



F
c. 100 - 130 mm

Leopard



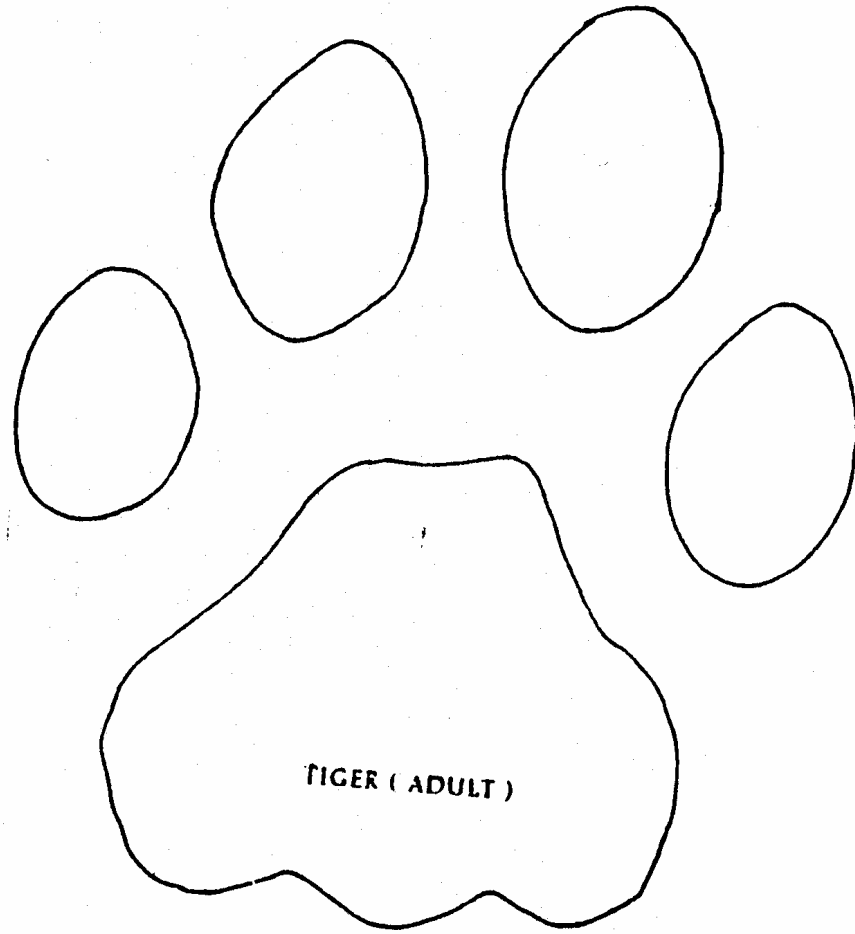
F
c. 70 - 90 mm



H
c. 60 - 80 mm



15.0







Caracal



F

c. 45 - 50 mm

H

c. 42 - 48 mm

Fishing cat



F

35 - 42 mm



Jungle cat



F

c. 30-35 mm

Asiatic wildcat



F

c. 30-35 mm



H

c. 30-35 mm

Domestic cat



F



H

(above and
below measure
c. 30-35 mm)



Leopard cat



F

22-30 mm



H

20 - 28 mm

Rusty spotted cat



F

18 - 22 mm



H

18-22 mm



PUGMARKS WITH CLAWS - LARGE

Measurements are quoted without claws as the size of claws can vary between individuals.

H = Hind tracks, F = Fore tracks.

All measurements are (c.) = approximate. The quoted measurements are derived after measuring tens of tracks on the field.

Sloth bear



F 80 - 110 mm



H 160 - 190 mm

Himalayan black bear



H 160 - 210 mm



F 80 - 130 mm



Striped hyena



F 80-90 mm



H 63 mm

Dhole



F 70-75 mm

Indian wolf



F 70 mm



H 60-64 mm

Large domestic dog (Boxer)



F 80 mm



H 68 mm



MEDIUM to SMALL

Indian fox



F 30 mm



H 28-32 mm

Small Indian
mongoose



F 25-28 mm



H 25-28 mm

Small Indian civet



F 20 mm



SMALL

Collared
hedgehog



F 22- 25 mm



H 25- 28 mm

Five striped squirrel



F 12 - 18 mm

Tree shrew



F 7 -10 mm



H 10 - 15 mm



HANDS AND FEET

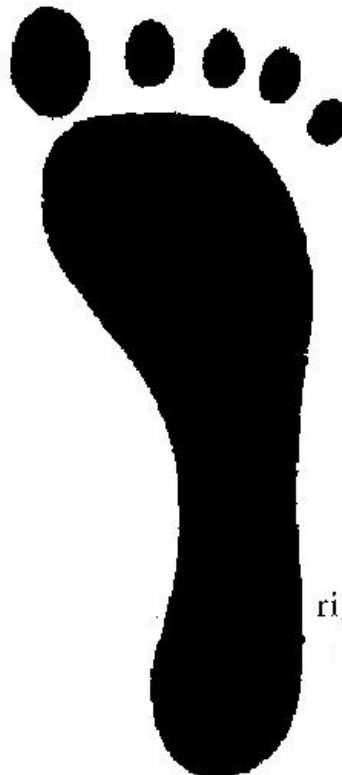
This group consists of langur monkeys, macaques, gibbons, lorises and giant squirrels. Langurs, gibbons, lorises and giant squirrels are principally arboreal thus spending most of their time in the trees, and although they come to the ground, most of their activity is in trees. Macaques, on the other hand, spend considerable time on the ground foraging. Waterholes and areas below fruiting trees are the best places to look for primate tracks. Giant squirrels have been included in this group because of their well- developed foot structure.

Langur monkey



H
120 mm

Man



right foot
250 mm

Macaque



F
65 - 80 mm

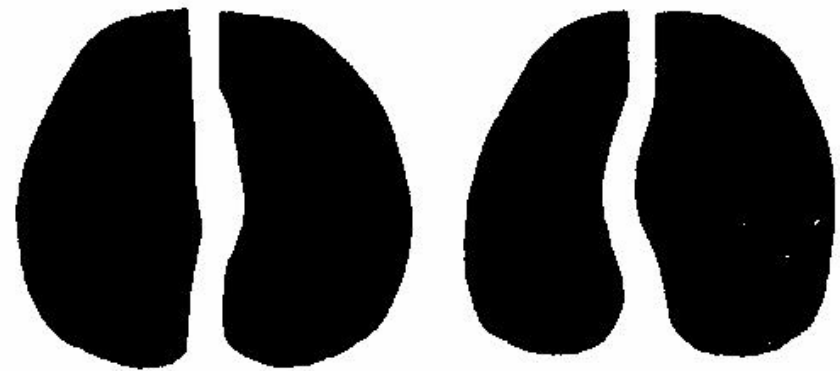


CLOVEN HOOFS

This group of animals includes cattle, gaur, wild buffalo, deer and antelope, pigs, goats and sheep. The hoofs of these animals have clefts in them and each hoof is separated into two sections. They also have dew claws, which are placed above the hoofs. These do not make impressions.



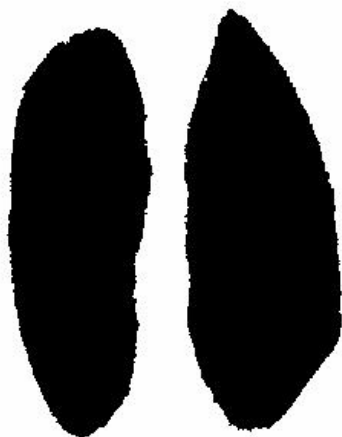
front tracks
Wild buffalo
120-160 mm



front tracks
Gaur
140 - 160 mm

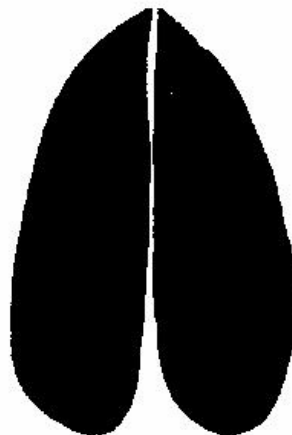


Sambar deer



front tracks
85 - 100 mm

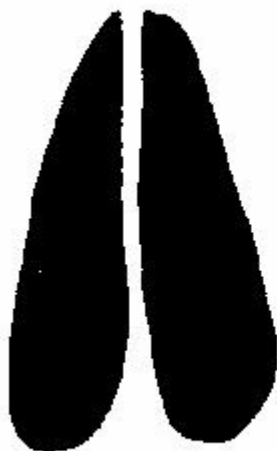
Nilgai



front tracks
87 - 100 mm



Spotted deer



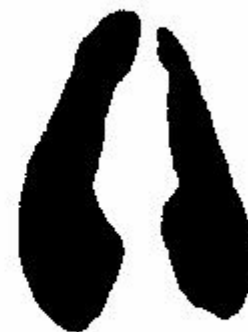
front tracks
50 - 66 mm

Hog deer



front tracks
48- 52 mm

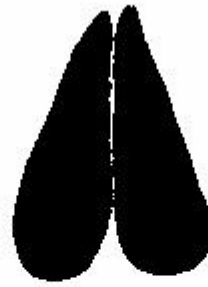
Barking deer



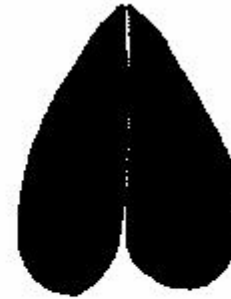
front tracks
35-49 mm



front tracks
40 -62 mm

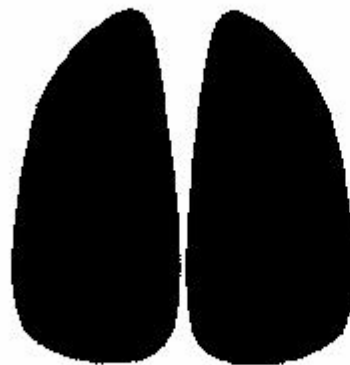


front tracks
45-50 mm



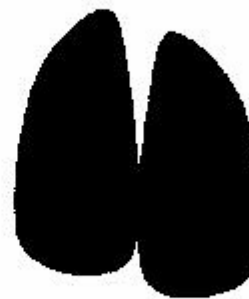
front tracks
40 -45 mm

Forehorned antelope



front tracks
50 - 65 mm

Wild pig



front tracks
45-58 mm

Goat



DROPPINGS AND BIRD PELLETS

All animals deposit undigested plant or animal matter in the form of droppings or pellets, but these droppings are not simply waste, they perform a complex and major role in the animal's existence. The droppings pass through the animal's intestines and finally exit through the anus. Many animals have scent glands or anal glands located close to their anus and as the droppings are excreted they touch these scent glands and pick up some of their singularly perfumed discharge. The dropping is now enveloped in a distinctive and specie unique smell which serves many functions for the animal. Droppings can be deposited in multiple locations signalling the animals' home range. The same droppings may be deposited at strategic locations where they act as territorial markers. Males can smell the droppings and keep track of which females are in heat or oestrus.



KEY TO DROPPINGS



Small pellets or small accumulations of tiny cylindrical pellets



Cylindrical pellets of differing sizes (deer and antelope dung)



Droppings of mixed shape and form



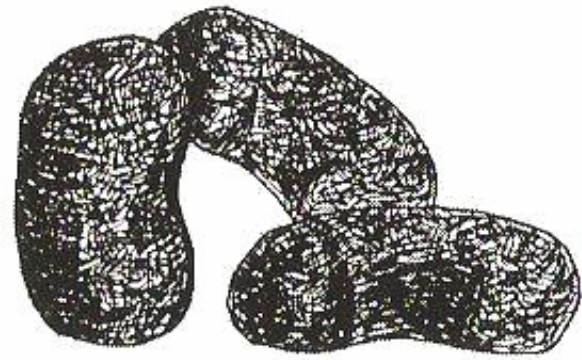
Sausage- shaped droppings with a point at one end



Sausage- shaped droppings, tapered at one end and usually segmented



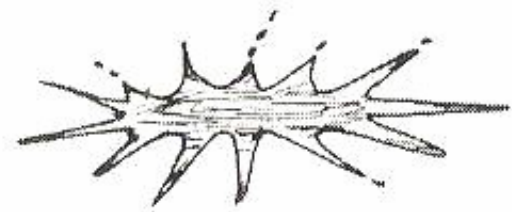
Thick pancake-like or
paratha-like droppings



Kidney- shaped droppings



Large barrel shaped droppings



Liquid droppings



Hares randomly drop their pellets and they are can frequently be seen on the forest floor. Once dry, they generally turn a light yellow colour, but the dropping's colour is influenced by the food the hares have consumed.



Note the cylindrical pellets of the hare. They measure c. 6 – 8 mm in diameter.



Categorising animal dropping

- Small pellets or tiny accumulations of cylindrical pellets
- Cylindrical pellets of differing sizes (deer and antelope dung)
- Droppings of mixed shape
- Sausage shaped droppings with a point at one end
- Sausage shaped droppings tapered at one end and segmented
- Kidney shaped droppings
- Thick pancake or paratha-like droppings
- Large barrel shaped droppings
- Liquid droppings
- Regurgitated bird pellets



CYLINDRICAL PELLETS OF DIFFERING SIZES (DEER AND ANTELOPE DUNG)



Sambar



Spotted deer



Barking deer



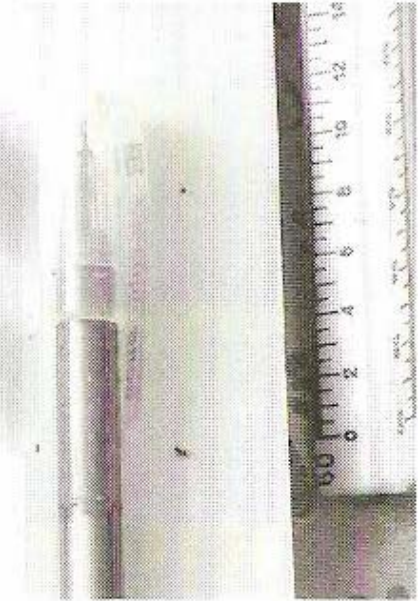
CYLINDRICAL PELLETS OF DIFFERING SIZES (DEER AND ANTELOPE DUNG)



Hog deer



Neelgai



Black buck





Sambar



Spotted deer



Barking deer



Chinkara



Hog deer



Mouse deer



Chowsingha

Four-horned antelope



Blackbuck



Nilgai

[Goat Palettes are common. See relative size of different animal's droppings](#)

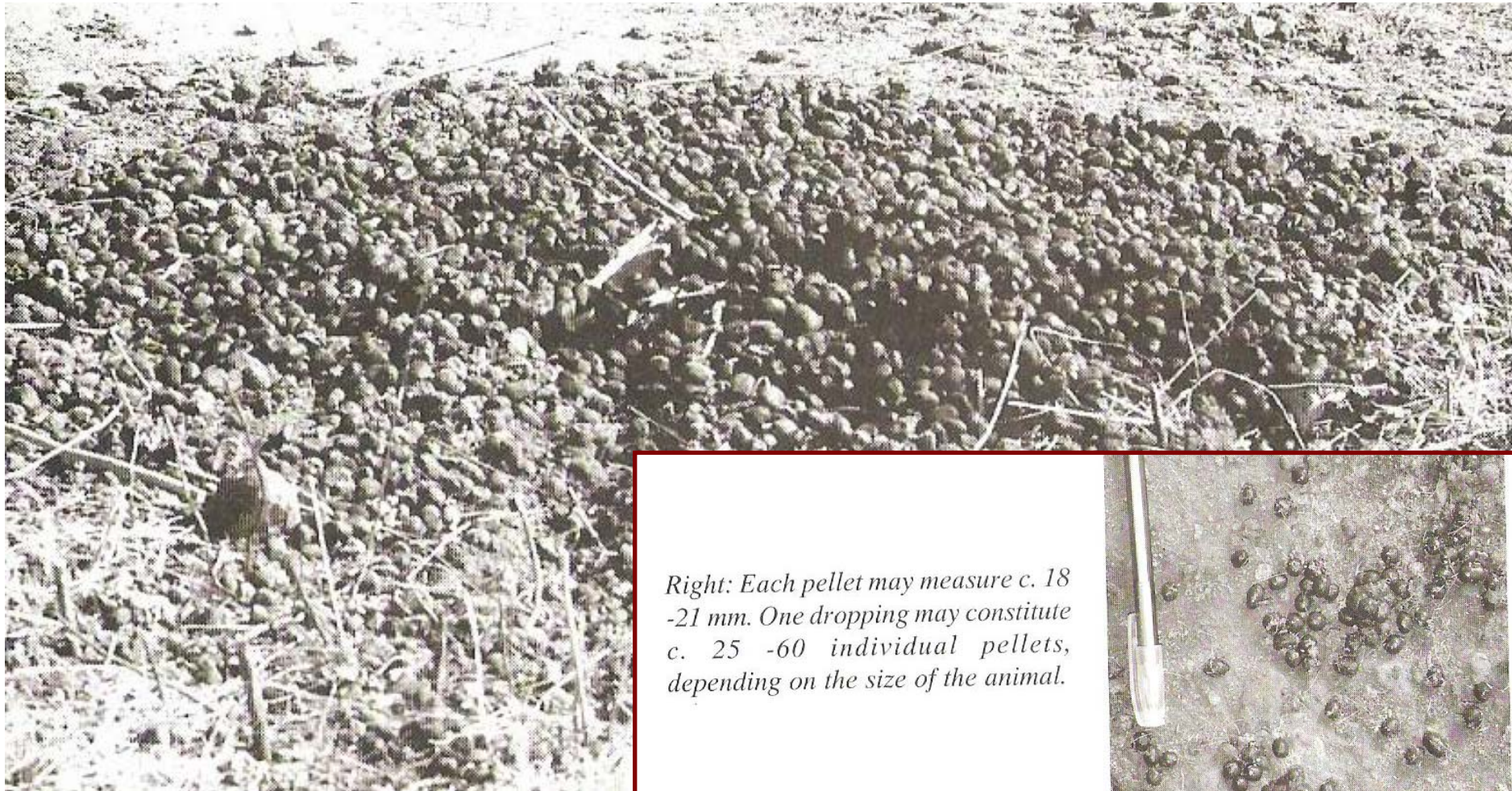


Goat



Sambar deer

The big males deposit droppings at regularly used latrine sites using them as territorial markers. Females, calves and juveniles may deposit at commonly used sites or may just deposit the droppings in small accumulations in their own home ranges.



Right: Each pellet may measure c. 18 -21 mm. One dropping may constitute c. 25 -60 individual pellets, depending on the size of the animal.

Spotted Deer

Animal of open/ semi-open grassland. Palettes slightly elongated, rarely exceed 12 mm in length. Randomly scattered (defecated during walking)



Barking deer

This forest-dwelling deer also has a very large distribution in India but is absent from arid and dry forests. They are solitary in nature but can sometimes be seen in small family groups. Their droppings can often be confused with those of spotted deer. However, with the exception of a very few wildlife reserves, barking deer and spotted deer live in different forest habitats. Barking deer droppings tend to disintegrate quickly because of the humid and moist climatic conditions that prevail in the areas in which they live.



Barking deer pellets are tapered towards one side and slightly rounded on the other. They measure c. 10 mm in length.



Nilgai or blue bull antelope

Nilgai are the biggest Indian antelope and have a wide distribution. They live mainly in large family herds although lone males and small herds comprising only young males and herds of only females are also seen. Males usually deposit their droppings in latrines and sometimes families comprising more than one adult female and her young deposit in common latrine sites. These latrines can be in strategic locations and occasionally even in the middle of vehicular paths. Sometimes smaller antelope like the chinkara gazelle or the four - horned antelope deposit their droppings along side nilgai droppings.

A randomly deposited dropping pile of a young nilgai female. Individual pellets measure c. 10 mm to 23 mm.



Blackbuck

This is an animal of the open plains. These herding animals are found in open and dry habitats of the country and some very large herds can still be seen in some reserves on the Deccan plateau and Central India. Blackbucks deposit their droppings in small latrines and adult pellets measure c. 12-15 mm in length in length. The droppings are cylindrical in shape.



Note the cylindrical shape of the pellets.

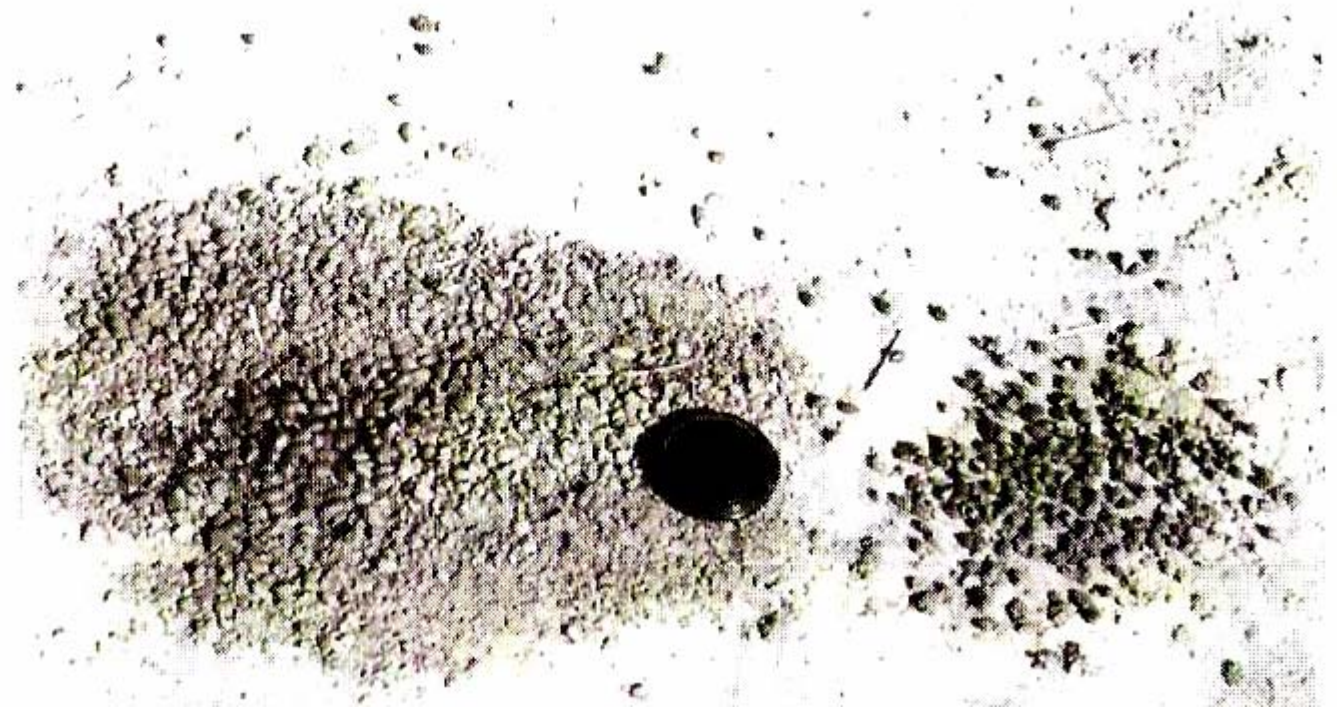


Note also the small pointed edge to one side. Latrines are commonly visible in blackbuck habitats.

Chinkara

The chinkara or Indian gazelle has a wide distribution in India. Animals of the dry open plains, they are not found in thick or moist forests. These fleet-footed antelope either deposit their droppings alongside other antelope latrines or have their own regularly used latrine sites. Their droppings are very tiny and resemble a small pea. They measure c. 3-4 mm in length. One end of the pellet is tapered and finishes in a small triangular notch.

*Note the
regularly used
latrine site of
a male
chinkara.*



Four - horned antelope

This ancient antelope species also has a very wide distribution but it prefers the cover of the forests, is seldom seen far from tree cover and never ventures into open habitat. These antelope deposit droppings in their own latrines and, like chinkara, sometimes on the droppings of other antelopes. These droppings can be confused with those of the chinkara gazelle as they are about the same size. However as they live in very different habitats, identification should be easy.

The coffee bean shaped droppings of the four-horned antelope. Note the Nilgai droppings next to them.



Some Other Evidences



Note the calf muscles torn and eaten by a tiger. The kill must have taken some time and exhausted the big cat. It only started eating the rest of the carcass 40 minutes after the kill.



Other Evidences

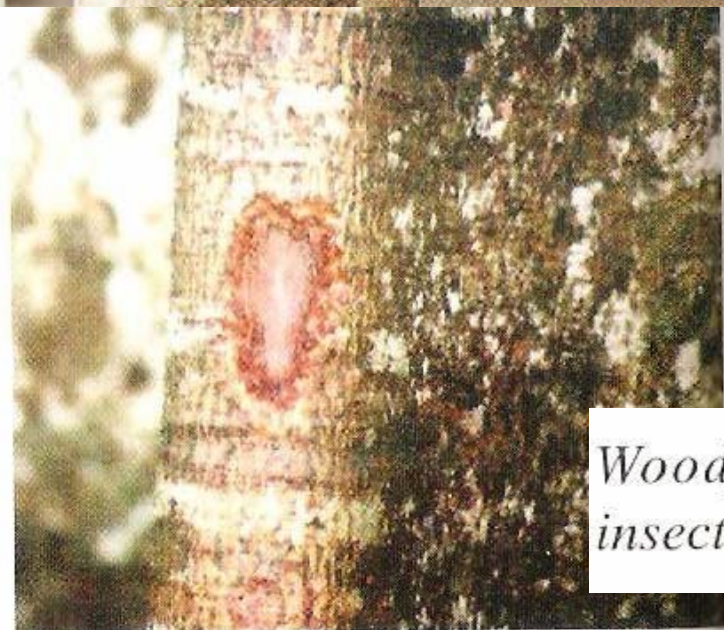
Note the two clean puncture marks made by the tiger's canine teeth. They are clearly visible on the white throat patch of the nilgai bull.



Wood-peckers start by tapping on trees and where ever they hear a hollow sound they tap harder and make a make small hole to gain access to the insect or its larva inside the tree trunk. This tapping sound can be heard in the forest if you are quiet during your walks.



Note the deep marks made by a woodpecker in the trunk of this tree.



Woodpeckers gain access to small insects found in the rot of trees.









Porcupines feed on the bark of trees. On this acacia tree their incisors are clearly marked on

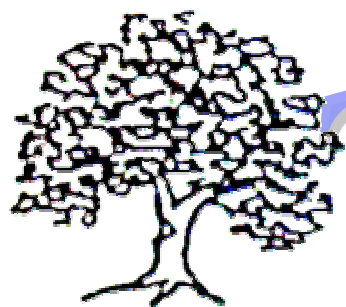
the inner trunk. The insides of this bark are fibrous and the big rodents seem to like it. These feeding signs of the porcupines cannot be missed.





Squirrels feed on insects found below decaying bark. Note the squirrel peeling the bark off the Terminalia arjuna tree.





Thanks

