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# Snake species diversity of Bor Wildlife Sanctuary, Wardha and Nagpur, Maharashtra, India

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## Abstract
26 snake species-17 non venomous, 4 semi venomous, and 5 poisonous-were identified in Maharashtra's Bor Wildlife Sanctuary area. Far from its native environment, the investigation discovered python in dry regions of Bor Wildlife Sanctuary. In order to preserve food chains and maintain environmental balance, snake conservation is essential. It is advised that the diversity of snake species in the area be continuously monitored. India is home to 275 of the world‘s 3000+ snake species. Based on the findings, we suggest that it is critical to promote public knowledge of the importance of snakes as bio control agents and environmental indicators. Snakes, with their elongated, limbless bodies, are among the world's most specialized creatures. They are present in practically every type of environment. Snakes' long, thin bodies are extremely muscular, with internal organs distributed along the narrow cylindrical trunk. The Boidae family has the biggest non-poisonous snakes. Pythons are oviparous, while boas are ovoviviparous. Most snakes have definite usefulness as predators of dangerous rodents, insects, and so forth.

**Keywords:** Snakes, Bor tiger reserve, Bor wildlife sanctuary, diversity, reptiles.

## Introduction
Snakes are extremely well adapted to their habitats namely aquatic, fossorial, arboreal and other terrestrial forms observed in Bor Wildlife Sanctuary. Although snakes may be helpful to humans if we understand their biology and environment, they can also be dangerous if handled or misinterpreted. Over 3000 snake species are found throughout the world. Snakes are present in all of the main habitats and ecosystems on Earth. Because they control rodent populations and protect crops from damage and consumption, farmers see snakes as partners. Snakes help maintain ecological balance by managing rodent populations and preventing the spread of disease.

The Bor Tiger Reserve of Maharashtra is a recent addition to Project Tiger, representing a typical assemblage of the Central Indian flora and fauna. Though smaller in size, the reserve is a -stepping stone‖ within a larger landscape comprising of several important tiger reserves and protected areas. Thus, this-satellite‖ habitat requires on going protection and related managerial support. (Comprises of the notified areas of Bor Wildlife Sanctuary, New Bor Wildlife Sanctuary and New Bor Extended Wildlife Sanctuary, forming the core critical tiger habitat as per Sec. 38 (V) of the Wildlife (Protection) Act 1972). The name of the Tiger Reserve has been derived from the main river Bor situated in the centre of the reserve. The tiger reserve is located in Nagpur and Wardha Districts of Maharashtra. The Geographic Co-ordinates of the Core Critical Tiger Habitat of Bor Tiger Reserve are as below: Latitude: N 200 55‘40‖ to N 210 3‘15‖ Longitude: E 780 34‘40‖ to E 780 47‘30‖. The Bor Tiger Reserve is significant for its ecological, environmental, watershed and interpretation values in the region. Bor Tiger Reserve has flagship species -The tiger‖ which is the species of global conservation importance. As this Tiger Reserve is situated in between Tadoba-Andhari Tiger Reserve and Melghat Tiger Reserve it plays a crucial role in accommodating tigers from TATR and also for migration of tiger to other protected Areas. So it act as a link between Eastern Vidarbha and Western Vidarbha and acts as a stepping stone. It is an important conservation unit in the Vidarbha region of Maharashtra State, acting as a 'Green Lung‘, while maintaining the ecological integrity of the area.

The habitat is a repository of precious gene pool with as many as 30 species of mammals, 160 species of resident and migratory birds, apart from reptiles (26 species) and amphibians and innumerable invertebrates. The area is rich in floral diversity, and is classified as the -Southern Tropical Dry Deciduous Forests‖ (type 5A/C1a- Champion and Seth). It serves as a living repository of various economical, medicinal, aromatic and ornamental plant species.

The reserve is largely situated in the Deccan trap with basalt formations, with the soil type varying from clayey loam to hard reddish murrum often found mixed with boulders of various sizes.The reserve is an important catchment of the Bor river and its numerous rivulets. Bordharan (Bor Dam) is located within the boundary of Tiger Reserve and reducing silt load / rate of siltation is one of the important function. The area attracts local pilgrims visiting the shrines of Khorikhapha and Bhondai, especially during the Mahashivratri celebrations. The habitat with its numerous life forms and scenic beauty provides considerable recreational value to the visitors.

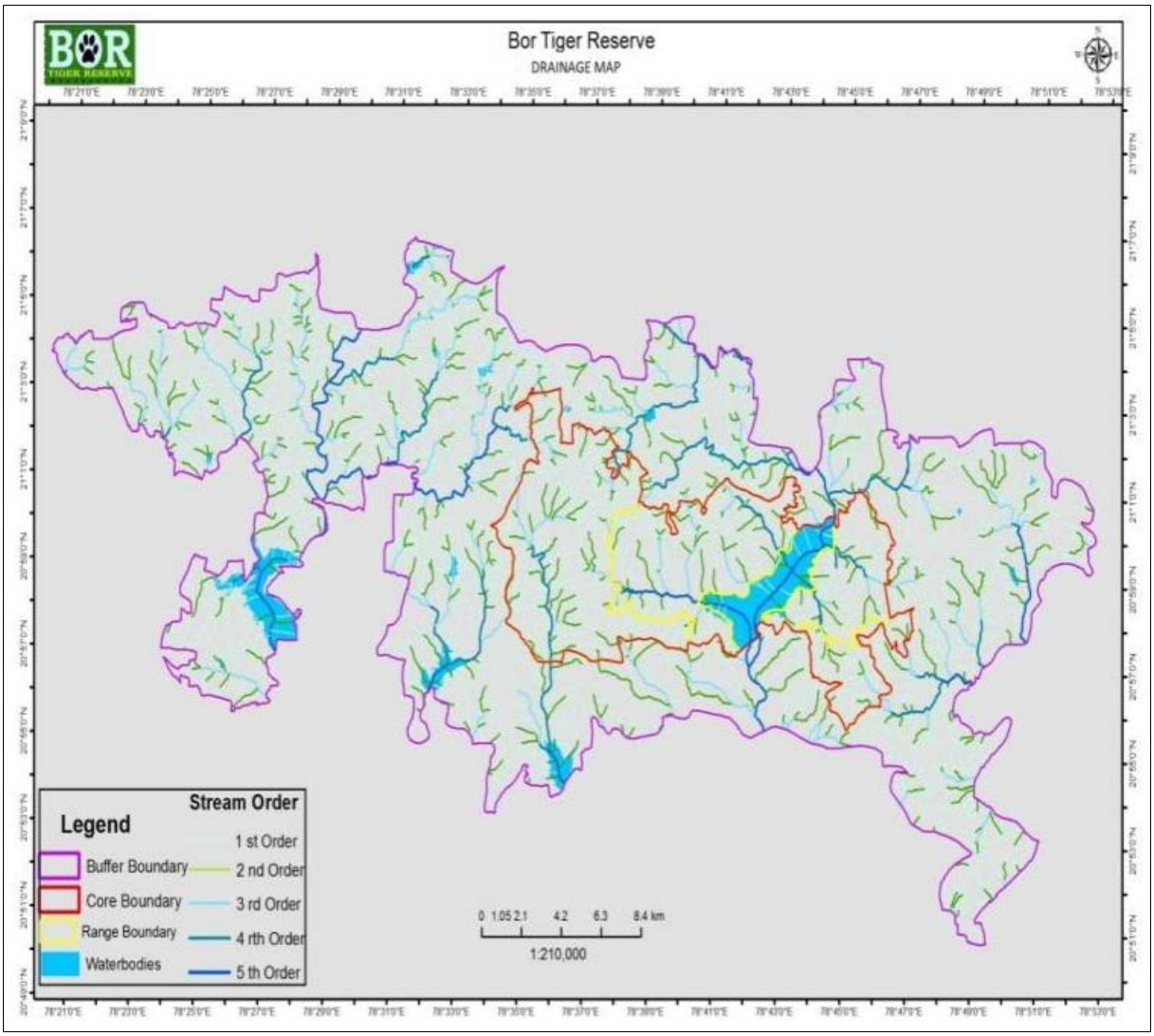


**Fig 1:** Map of Bor Wildlife Sanctuary

## Materials and Methods

Snakes were taken by a trained catcher during visits, at random, or at the request of locals who saw them in their homes or surrounding areas. The snakes were photographed and identified based on Deoras (1970) [6], Romulus Whitaker, and Khaire (1977) [14]. The caught snakes were then released into the woodland environment. To assess the diversity and distribution of snake species in Data was acquired from several ecosystems in the Bor Wildlife Sanctuary area. Volunteer snake pals, reports on road deaths and encounters. Throughout amateur tracking and field observations. Throughout this in this investigation, only pictures were used. The data were obtained for the years 05 Jan 2024 to 31 Dec 2024. The snake species were categorized. As venomous, semi-venomous, or non-venomous and also classed based on habitat differences. The species were: Snakes are recognized using conventional identification keys.

## Result

Approximately 165+ snakes were caught throughout the study. The confiscated snakes were categorized into seven families: Colubridae, Pythonidae, Typholopidae, Boidae, Psammophiidae, Elapidae, and Viperidae, which included 26 distinct species. Five poisonous snakes, seventeen non-venomous snakes, and four semi-venomous snakes were recorded from various locations in Bor Wildlife Sanctuary, Maharashtra. Following thorough examinations, the rescue snakes were recognized, photographed, and classed using the published guidelines.


**Photopla te I:** A) Checkered Keelback Water Snake, B) Indian Earth Boa, C) Common Wolf Snake, D) Common Krait, E) Spectacled Cobra, F) Striped Keelback, G) Green Keelback, Bronzeback Tree Snake, I) Russell's Viper.

**Table 1:** Checklist of Non Venomous, Semi- Venomous and Venomous snakes in Bor Wildlife Sanctuary, Maharashtra

| Sr. No. | Family | Name of Snakes | Scientific Name | Behavior and Habitats | Nature |
|---|---|---|---|---|---|
| 1 | Colubridae | Common Wolf Snake | *Lycodon aulicus* | Nocturnal and prefers to stay in Solitude. | Non-Venomous |
| 2 | Colubridae | Common Trinket Snake | *Coelognathus Helena* | It can be observed on shrubs and trees. | Non-Venomous |
| 3 | Colubridae | Montane Trinket Snake | *Coelognathus Helena monticollaris* | It has a short fuse, is diurnal, and is quite active. | Non-Venomous |
| 4 | Colubridae | Indian Rat Snake | *Ptyas mucosa* | Forest floors, marshes, rice fields, farming, and residential areas. | Non-Venomous |
| 5 | Colubridae | Banded Racer | *Argyrogena fasciolala* | Primarily terrestrial, but may climb trees to find food. | Non-Venomous |
| 6 | Colubridae | Banded Kukri Snake | *Oligodon arnensis* | Quiet, evasive, and largely non-offensive. | Non-Venomous |
| 7 | Colubridae | Bronze back tree Snake | *Dendrelaphis tristis* | Diurnal animals are active during the day. | Non-Venomous |
| 8 | Colubridae | Barred Wolf Snake | *Lycodon striatus* | Diurnal, Terrestrial. | Non-Venomous |
| 9 | Colubridae | Dumeril‘s Black headed Snake | *Sibynophis subpunctatus* | Active throughout the day and night. | Non-Venomous |
| 10 | Colubridae | Checkered Keelback water Snake | *Xenochrophis piscator* | Freshwater lakes and rivers. | Non-Venomous |
| 11 | Colubridae | Striped Keelback | *Amphiesma stolatum* | In well-watered, Diurnal. | Non-Venomous |
| 12 | Pythonidae | Indian Rock Python | *Python molurus* | Semi-deserts, grasslands, and rainforests. | Non-Venomous |
| 13 | Typholopidae | Beaked Worm Snake | *Grypotyphlops acutus* | Under rocks, Soil. | Non-Venomous |
| 14 | Typholopidae | Brahminy Blind Snake | *Ramphotyphlops braminus* | Under rocks,Soil. | Non-Venomous |
| 15 | Boidae | Common Sand Boa | *Gongylophis conicus* | Rocky terrain, scrub forests, and sandy places. | Non Venomous |
| 16 | Boidae | Indian Earth Boa | *Eryx johnii* | Rocky terrain, scrub forests, and sandy places. | Non Venomous |
| 17 | Colubridae | Green Keelback | *Macropisthodon* | Low vegetation and grass. | Non-Venomous |

| | | | | | |
|---|---|---|---|---|---|
| | | | *plumbicolor* | | |
| 18 | Colubridae | Common Cat Snake | *Boiga trigonata* | Slow and elusive, hiding under a tree. | Semi-Venomous |
| 19 | Colubridae | Vine Snke | *Ahaetulla nasuta* | Lives in the trees. | Semi-Venomous |
| 20 | Colubridae | Forsten‘s Cat Snake | *Boiga forsteni* | Slow and elusive, hiding under a tree. | Semi-Venomous |
| 21 | Psammophii dae | Stout sand Snake | *Psammophis longifrons* | Diurnal, Terrestrial. | Semi-Venomous |
| 22 | Elapidae | Common Krait | *Bungarus caeruleus* | Active at Night time. | Venomous |
| 23 | Elapidae | Spectacled Cobra | *Naja naja* | Agricultural fields, meadows, and woods, acting aggressively. | Venomous |
| 24 | Viperidae | Saw Scaled Viper | *Echis carinatus* | Rock,Sand,Scrubkand. | Venomous |
| 25 | Viperidae | Russell‘s Viper | *Daboia russelii* | Agricultural fields, forests, and sandy places. | Venomous |
| 26 | Viperidae | Bamboo Pit Viper | *Trimeresurus gramineus* | Lives in the trees. | Venomous |

## Conclusion

According to the present study, the Bor Wildlife Sanctuary has 26 snake species from seven different families: Colubridae, Pythonidae, Typholopidae, Boidae, Psammophiidae, Elapidae, and Viperidae. While Russell's viper, a lethal snake, and semi-poisonous snakes were frequent, the present study found that non-poisonous snakes were more numerous.

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