
REVIEW ARTICLE

A Current review on Ophio-diversical Distribution and Status in Bundelkhand region of India

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ABSTRACT

The present review deals with the study of ophiological distribution in Bundelkhand region. This region consists of thirteen districts, out of which seven belongs from Uttar Pradesh and six from Madhya Pradesh. For study purpose we select five districts which represent the mean area of Bundelkhand region. During twelve month study, we collect the data from different sources and compare it with previously recorded data and concluded that two species of snakes from Bundelkhand region are threatened while three newly species of snakes are introduced in study area. Probable reason of this outcome is due to the migration of species from one habitat patch to another patch and their inheritance tendency of Edge effect

Key words: *Ophio-diversical distribution, Threatened, Migration, Edge effect, Bundelkhand region.*

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INTRODUCTION

Bundelkhand is the Historical place of central India. It is always the attractant site for visitors due to its historic culture and huge biodiversity. It lies between Indo-Gangetic plain to North and the Vidhya range to the south. Its location on the globe is between 23°20' & 26°20' N latitude and 78°20' & 81°40' E longitude. It is approximate ± 500 meter above sea level and average annual rainfall is 800- 900 mm [1]. According to the report of forest survey of India 2005, total forest area covered by this region is 195000 hectare but now this area also decline rapidly due to extensive human activities. This region comprises southern Uttar Pradesh and northern Madhya Pradesh with thirteen districts out of which seven districts from Uttar Pradesh viz. Jhansi, Jalaun, Lalitpur, Hamirpur, Mahoba, Banda, Chitrakoot and six districts from Madhya Pradesh viz. Datia, Tikamgarh, Chattarpur, Damoh, Sagar and Panna.

From ancient to present, the relationship between snakes and humans is always very complicated in each society. These creatures are always human centered due to their ethical, educational, entertainment, religious, social, cultural and economic reasons. Snakes are part of our ecosystems and they play a vital role in pest-control. Along with that, they form a vital part of the food chain as a prey as well as a predator. These important animals are always threatened by anthropogenic and environmental factors [2]. They occupied in deserts, forests, marshy, swampy places, lakes, streams, and river of different terrains. Snakes also show great diversity in their length as well as in their weight [3]. Their range varies from tiny 10cm. long thread snake to pythons and anacondas of up to 7.6 meter (25 ft) in length [4]. Biogeographically Bundelkhand is the hot arid zone hence rich in reptilian diversity. Keeping in this view the present review has been undertaken and it embodies the current situation of ophiological diversity and distribution in Bundelkhand region.

MATERIAL AND METHODS

Location of the study area

The investigation was conducted in five districts of Bundelkhand region, three districts from Uttar Pradesh namely Banda, Jhansi, Lalitpur and two districts from Madhya Pradesh namely Damoh and Panna. The main reason for selection of this convenient study area was due to its representation the mean of Bundelkhand region as well as their biodiversity richness.

Schedule of data collection

The study carried out from February 2015 to March 2016. During this entire study period, the visibility of snakes was recorded in all four seasons *v.i.z.* autumn, summer, monsoon and winter. Snakes visibility seen more in early morning, late evening and night.

Sources of data collection

Habitat niche of snakes from all five districts was selected for data collection. Data were collected by visual encounter, through cam-recorders of snake's niche, interviews/questioners with snakes charmers, pouchers, local villagers, guides, forest officers, records from U.P., M.P. biodiversity board, and books were also included under study.

Identification of species

Through visual encounter, captured photographs, pictures and videos, discussion with snake charmers, local villagers and tribesman, all the species were identified as per [5, 6, 7, 8, 9].

DISCUSSION

There is not enough work was carried out in the field of ophio-diversical distribution in Bundelkhand region. During this review study, sixteen snakes species were recorded from various region of study area while previous study support that fourteen species were identified and seen in Bundelkhand area [10]. Out of sixteen species, thirteen species were previously recorded and three species were newly sighted namely *Spalerosophis diadema* (Schlegel, 1837) venomous, *Argyrogena fasciolatus* (Show, 1802) non venomous and *Bungarus fasciatus* (Schneider, 1801) venomous, from district Jalaun, Panna and Banda respectively (Table-1, Graph-1). The previous records support that the above indicated three species were never observed in Bundelkhand region, however they are the native species of several plain areas of different region in Indian states such as Rajasthan, Bihar, Chhattisgarh, Haryana, Punjab, Jharkhand, some areas of Uttar Pradesh (West) and Madhya Pradesh (south), except Bundelkhand region. The two previously present species *viz.* *Doboi russelli* and *Lycodon aulicus* were not observed even at their habitat area (Table-1, Graph-1). The probable reasons behind introduction of newly observed snake species is due to their immigration from previous habitat to newer habitat and their inherent tendency of Edge effect, while snake species which were not observed during the study period is due to their emigration, habitat destruction, illegal collection, medical demand, lack of conservation awareness pouching and introduction of alien species in their habitat area.

Table-1

S.No.	LOCAL NAME	SCIENTIFIC NAME	FAMILY	PREVIOUSLY RECORDED	CURRENT STATUS
1.	Ajgar	<i>Python morulus</i>	Pythonodae	+	+
2.	Dhaman	<i>Ptyas mucosa</i>	Colubridae	+	+
3.	Kukri snake	<i>Oligodon arnesis</i>	Colubridae	+	+
4.	Paniyal	<i>Xenochrophis piscator</i>	Colubridae	+	+
5.	Russel viper	<i>Doboi russelli</i>	Viperdae	+	-
6.	Bharminy	<i>Ramphotyphlops braminus</i>	Typhlopidae	+	+
7.	Jatuni doria	<i>Atretium schistosum</i>	Colubridae	+	+
8.	Aphai	<i>Echis carinatus</i>	Viperdae	+	+
9.	Korial	<i>Lycodon aulicus</i>	Colubridae	+	-
10.	Kala naag	<i>Naja naja</i>	Elapidae	+	+
11.	Sand boa	<i>Eryx johnii</i>	Boidae	+	+
12.	Black headed snake	<i>Sibynophis subpunctatus</i>	Colubridae	+	+
13.	Gray's rat snake	<i>Coluber ventromaculatus</i>	Colubridae	+	+
14.	Royal snake	<i>Spalerosophis diadema</i>	Colubridae	0	+
15.	Banded racer	<i>Argyrogena fasciolatus</i>	Colubridae	0	+
16.	Pattidhari snake	<i>Bungarus fasciatus</i>	Elapidae	0	+

+	Previously/ Currently recorded
+	Newly observed/Sighted
-	Not observed now / Threaten

Graph-1

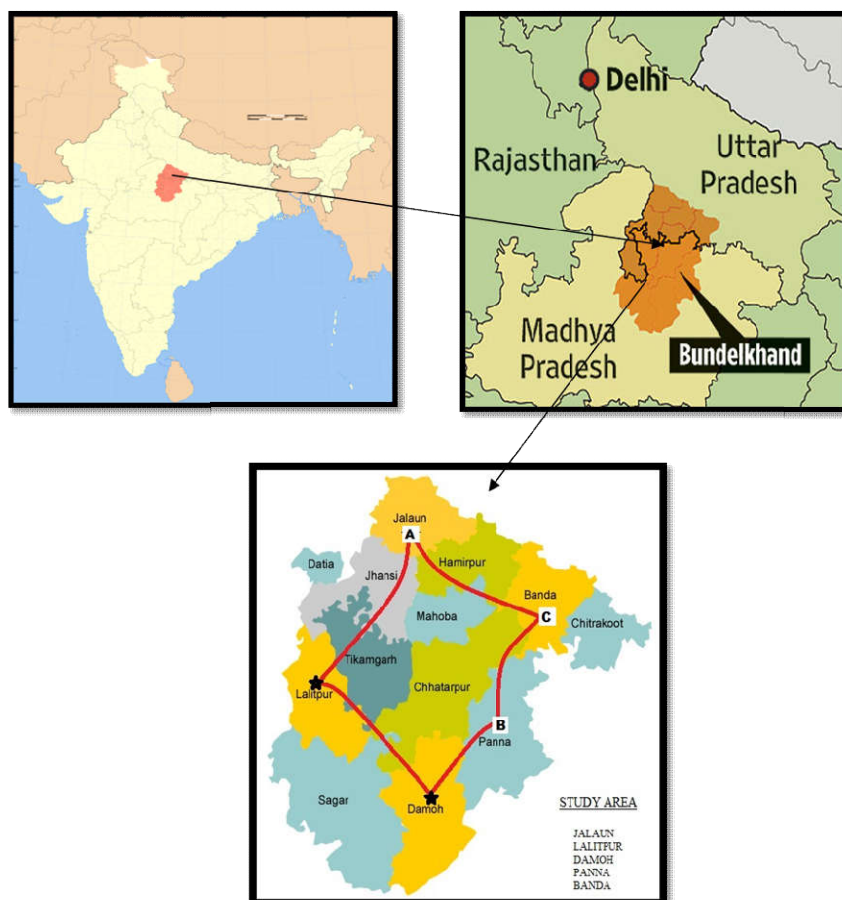
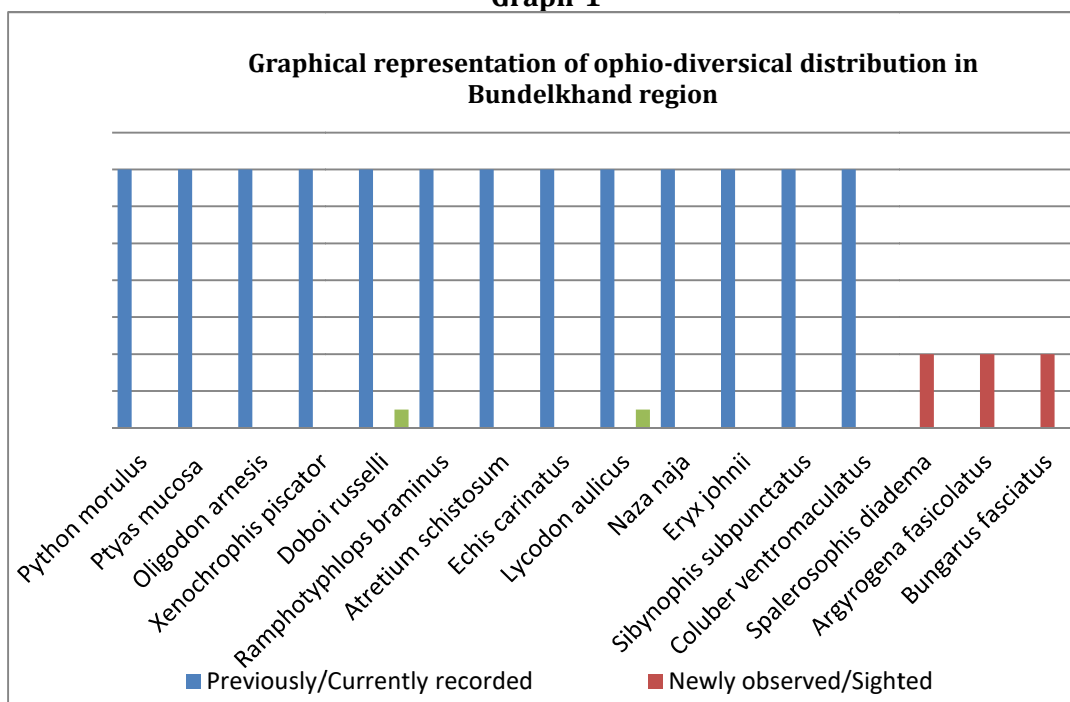





Fig 1: Map of India, Bundelkhand region and selected area in Bundelkhand

(A)	(B)	(C)
		
<p>Zoological Name <i>Spalerosophis diadema</i></p> <p>Observable Place: District-Jalaun (U.P.)</p>	<p>Zoological Name <i>Argyrogenafasicolatus</i></p> <p>Observable Place: District-Panna (M.P.)</p>	<p>Zoological Name <i>Bungarus fasciatus</i></p> <p>Observable Place: District-Banda (U.P.)</p>

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