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Scattered distribution & low abundance of worm snakes vis-a-vis blind snakes of superfamily Typhlopoidea of Madhepura, Bihar, India

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Abstract : Common worm snakes also known as blind snakes are members of several non-venomous snakes characterized by degenerate eyes that lie beneath opaque head scales. As regards distribution, they are fossorial or burrowing and are regularly associated with termite's and ant's nest (termitorium and antorium respectively) as symbionts. Different species of blind snakes belong to the families Anomalepidae, Leptotyphlopidae and Typhlopidae falling under the superfamily Typhlopoidea. However the populations of these worm snakes are very small in the terrestrial tubes and termite's as well as ant's nests. *Typhlops neszoelyi* (Daudin), a species of family Typhlopidae is the most common worm snake variously known as braminy blind snake, flowerpot snake, common blind snake etc. Since these three families are placed within the infraorder Scolecophidia of the order Ophidia, blind snakes are sometimes also called "Scolecophidian snakes". As such, the diversity quantum of such creatures although may not be threatened or endangered is very less. In this communication, the unique scattered patterns of distribution & low diversity in terms of species relative abundance on the basis of survey & sampling of the creature in their natural abode have been discussed.

Keywords:- worm snake, typhlopoidea, distribution & relative abundance

INTRODUCTION

Superfamily Typhlopoidea belonging to the infraorder Scolecophidia, suborder serpentes or ophidia of class reptilia is represented by several worms like nonpoisonous snakes that fall under three important taxonomic families viz Anomalepidae, Leptotyphlopidae and Typhlopidae.¹

There are several species of snakes which looks like worms and hence known as worm snake. These worms snake usually shares the characteristics of small size,

primarily subterranean habitat, and small eyes and thus resembles like earthworm and therefore sometimes people get confused. These snakes are sometimes also known as blind snake which is also alternative common name. Since these three families fall within infraorder Scolecophidia, blind snakes are sometimes also called "scolecophidian snakes". Blind snakes are mainly small with blunt heads, cylindrical bodies, and short tails. Their bodies are encased in smooth, shiny scales. All are fossorial and are regularly associated with termite and ant nests having scattered but clumped distribution. As such, many numbers of individuals of a species can be noticed in small clumped coil.²⁻³

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In the present communication the pattern of distribution of different species of the genus *Typhlina* belonging to the different family Typhlopoidea along with its low population density & abundance has been reported which may serve as the indicator of their population density in terms of survival security as well as management in their contribution in the environmental ecology.⁴

As regards the study distribution and abundance of these snakes, it is mandatory to understand their natural place of occurrence & feeding habits. Usually, they are found in both urban and rural agricultural areas with sufficient moisture in the soil.⁵ These species are terrestrial, but some specimens have been observed in arboreal habitats.⁶ These snakes also live underground in group (clumped form) in ant and termite nests which are called antorium and termitorium. They are also found under logs, moist leaves, stones and humus in wet forest, dry jungle, abandoned buildings and even city gardens. The distribution and survival of this group of blind snakes directly reflect soil humidity and temperature.⁷ Their diet consists of the larvae, eggs, and pupae of ants and termites.⁵

MATERIAL & METHOD

Random sampling of the snakes were made from different subterranean tubes & soil surface of following five places of Madhepura-Gamharia, Singheswar, Gwalpara, Kumarkhand & Alamnagar. In most of the habitat very low abundance of the species has been found, somewhere as low as one individual in one quadrat.

Table 1: Site specific abundance of three sampled species of worm snake from different sampling sites of Madhepura

| Sl. no. | Name of the species | Individual no. per quadrat | Sampling sites |
|---------|----------------------------|----------------------------|-----------------------|
| 1 | <i>Typhlops bramini</i> | 4 | Gamharia, Singheswar |
| 2 | <i>Typhlops loveridgei</i> | 2 | Gwalpara, Kumarkhand, |
| 3 | <i>Typhlops neszoelyi</i> | 1 | Alamnagar |

Fig 1(A-E): Distribution & abundance of worm snakes from different sampling sites of Madhepura, Bihar



A. Species 1 in site 1: Gamharia (*Typhlops bramini*)



B. Species 1 (repeat) in Site 2: Singheswar (*Typhlops bramini*)



C. Species 1 in Site 3: Gwalpara (*Typhlops loveridgei*)



D. Species 2 (repeated) in Site 4: Kumarkhand (*Typhlops loveridgei*)

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E. Species 3 in Site 5: Alamnagar (*Typhlops neszoelyi*)

RESULTS & DISCUSSION

As per random sampling data obtained from this study, three different species of worm snakes belonging to the genus *Typhlops* have been found with single and repeated occurrence in five different sampling sites of Madhepura.(Table:1).

The number of individuals from each sampling quadrat reflects that *Typhlops bramini* was in highest abundance (4 in five sites) whereas *Typhlops neszoelyi* was in lowest (only 1 in site 5).

No such abundance report of the worm snake has been made by any author so far although world wide occurrence of various species of different genera like *Typhlops*, *Grypotyphlops*, *Ramphotyphlops* has been reported by various authors.

As regards distribution of the worm in the light of its natural occurrence in the habitat, it has been clearly observed that the snakes love single living in the open habitat while in clumped cluster in the ant & termite closed nests.

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