

Snake survey and awareness programmes at Sonadih and Arasmeta Cement Plants, Chhattisgarh, India

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There are about 280 snake species reported from India. This is about 10% of snake species found in the world. Out of these, only around 60 species are venomous and merely four species, Spectacled cobra *Naja naja*, Common krait *Bungarus caeruleus*, Russell's viper *Daboia russelii* and Saw-scaled viper *Echis carinatus* are distributed throughout India.

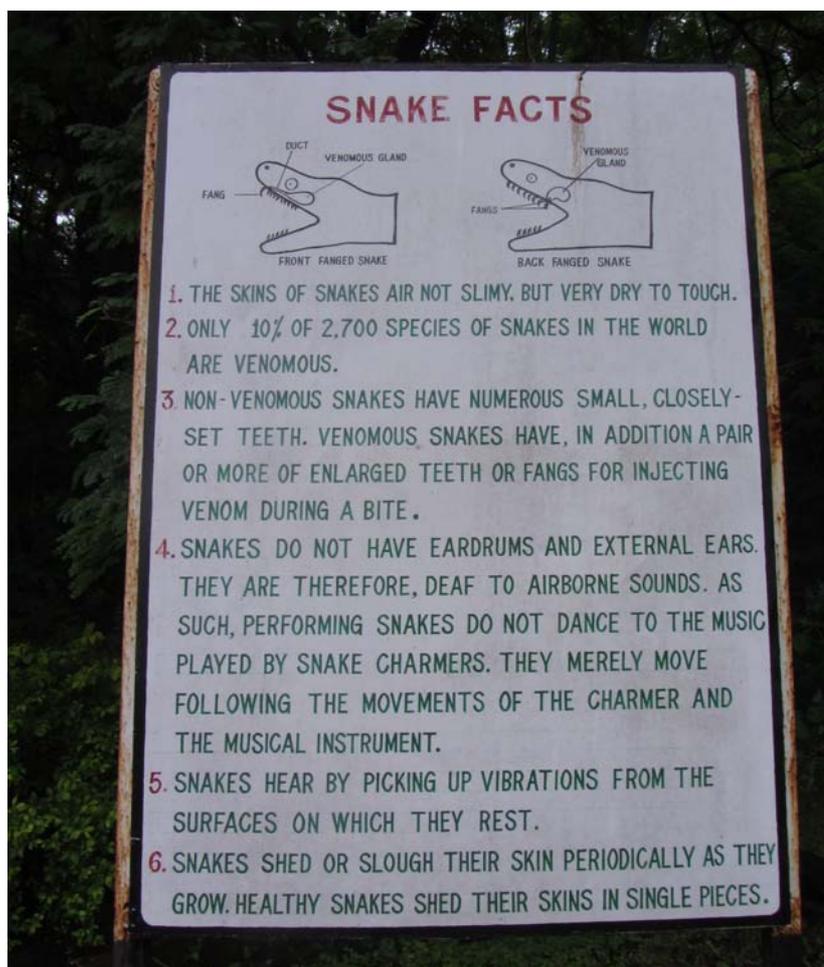
Snake-phobia in human is instinct. Most of the time snakes are killed when sighted irrespective of venomous or non-venomous. This is mainly due to ignorance. No one knows that how many snakes are killed for above reason, as there is no data for this kind of indiscriminate killing. To avoid such killings, government departments, non-governmental agencies and animal lovers started snake rescue in different parts of the country. Apart from rescue, snake awareness programmes play pivotal role to bring change. Sundarvan is an activity of Centre for Environment Education (CEE), is recognised as a mini zoo, located in Ahmedabad, Gujarat, India, play a leading role in snake rescue and to create awareness in this part of the country.

Lafarge India Private Limited approached Sundarvan to conduct a snake survey and awareness programme for their cement plants located in Chhattisgarh. A four member team, authors along with two traditional snake catchers hired to assist in the field, carried out the programme from 22–31 July 2012. The programme was conducted in Sonadih and Arasmeta plants located in Raipur and Bilaspur districts respectively.

The intensive search was carried out in residential, plant and mine areas to document the snake diversity. Two members team conducted 24h 30min search during day and 4 hours during night at Sonadih and 6 hours day search and 6h 30min night search at Arasmeta. Snake rescues were also made, whenever we received calls. A total of 24 snakes of six species were sighted/rescued during this 9 days period (Table 1).



An awareness programme for colony residents



A sign board showing some facts on snakes erected in a prominent location in Arasmeta – such information boards are essential to make long-term impact

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Table 1. Snakes recorded/rescued in Sonadih and Arasmeta

Species	Sonadih	Arasmeta
Indian rat snake <i>Ptyas mucosa</i>	(2)	(1)
Banded racer <i>Argyrogena fasciolatus</i>	1	0
Striped keelback <i>Amphiesma stolatum</i>	9(1)	2
Common wolf snake <i>Lycodon aulicus</i>	(5)	0
Common krait <i>Bungarus caeruleus</i>	0	1
Banded krait <i>Bungarus fasciatus</i>	0	3

Note: Numbers in parenthesis are snakes rescued and others, recorded during the search.

Table 2. Details of snake awareness programme conducted in Sonadih and Arasmeta

Target groups	No. of participants	
	Sonadih	Arasmeta
School children	500	150
Employees	150	160
Homemakers/Ladies club members	40	0
Security personnels	0	40
Colony residents	0	260

Apart from above listed species, presence of some more snake species in these sites was confirmed through former records and from other evidences. Though sloughs of Spectacled cobra were recorded at both sites, the snake was not sighted during the survey. The first author has recorded common kukri *Oligodon arnensis* and Checkered keelback *Xenochrophis piscator* from these sites during his survey in April 2011. Photographic evidence from people living in the premises shows that Indian rock python *Python molurus molurus* is found in both the sites. Besides snakes, other reptiles such as Common Indian monitor *Varanus bengalensis*, Common Skink *Mabuya carinata*, Bronze grass skink *Mabuya macularia*, Fan-throated lizard *Sitana ponticeriana* and Termite hill gecko *Hemidactylus triedrus* were also recorded during this survey.

Snake awareness programmes were conducted for school children, employees, security personnels, homemakers and colony people (Table 2). A powerpoint containing general facts about snakes, diversity, common snakes around us, big four venomous snakes, things to avoid bite, snakebite and treatment, myths and facts, importance of snakes, threats and conservation was presented to the participants and was well received. The participants raised many questions to clarify their doubts, especially on first aid, treatment and myths.

Besides these, six security guards were deputed with us to learn things to do snake rescue in future. Based on our observation in the survey sites, safety measures were suggested to the management to avoid snakebite. We strongly believe that the entire exercise will help them to considerably bring down the snakebite incidents and will also save snakes from getting killed.

Snakebite remains an important cause of accidental death in modern India, and its public health importance has been systematically underestimated

(Mohapatra *et al.* 2011). This high rate of mortality is due to lack of knowledge among general public on how to react when bite occurs, unnecessary fear (main killer), opting discredited treatments, etc. In such a scenario, the proper documentation and snake awareness programmes bring tremendous change. Days of getting help from snake charmers to handle this problem has gone and agencies would like to address this issue scientifically now. More such initiative from different agencies helps to disseminate scientific information to bring down snakebite and mortality rate.

Acknowledgements

We thank Mr. Govind Pratap Singh, Deputy General Manager - P & A, Sonadih Cement Plant for materializing this project. He showed keen interest and made all the logistic arrangements to make the programme success. We are grateful to Mr. Rajendrasinh Jadeja, Coordinator, Sundarvan, for his support.

Reference

Mohapatra, B., D.A. Warrell, W. Suraweera, P. Bhatia, N. Dhingra, R.M. Jotkar, P.S. Rodriguez, K. Mishra, R. Whitaker & P. Jha. (2011). Snakebite mortality in India: A nationally representative mortality survey. *Neglected Tropical Diseases* 5(4): 1-8.

