



ICONFILMS

## PUBLICITY NOTES ONE MILLION SNAKE BITE

- The Story** Indian snake expert **Romulus Whitaker** investigates the natural history behind India's staggering new snakebite statistics.
- His quest for answers takes Rom and his team from the deserts of Rajasthan to the forests of Assam, bringing them up close and personal with eleven species of India's venomous snakes.
- The Problem** India could be experiencing as many as **50,000** fatalities from as many as **One Million Snakebites**, every year.
- These figures have come to light due the **Million Death Study** - undertaken by Toronto University's Centre For Global Health Research.
- Causes** India's snakebite epidemic is a complex problem and has a number of potential causes:
- **Social:** India is the second most populous country in the world with over **1.18 billion people** (estimate for April 2010). **70%** of the population live in rural areas and are below the poverty line. **65 %** live without indoor sanitation. Poor sanitation and refuse treatment can lead to increased numbers of rodents which in turn increase snake numbers.
  - **Cultural:** A large number of Indians still believe strongly in herbal and traditional forms of medicine. Although traditional, **Ayurvedic medicine** is thought to have a number of benefits for many ailments, it has no proven effective treatments for a venomous snakebite. Pursuing traditional cures wastes critical time and greatly reduces the effectiveness of conventional medicine, administered in the form of **Antivenom**.
  - **Medical:** Rom and his colleagues have suspected for some time that India's snakebite antivenom may not be as effective as once thought. Some Indian snakes may experience **regional differences** in the toxicity of their venom. If this is proven to be correct, it could mean that antivenom in some parts of India could be wholly ineffective. At present, the majority of India's antivenom is produced from venom sourced from one region - a far from ideal situation.

### What Can Rom Do?

Rom hopes that combining his many years of field experience, with his son Samir's knowledge of toxicology and the snake hunting skills of Kali, an exceptional young tribal snake catcher, will **allow them an unrivalled insight into the facts behind these staggering statistics**. They will attempt to find out which snakes are doing the biting, who's getting bitten and why, and what can be done to help mitigate this incredible death toll.

Rom also hopes that by collecting venom samples from snake species never before tested, he will allow scientists to finally answer the riddle of India's suspected regional differences in snake venom, which in turn he hopes will greatly help in the production of far more effective antivenom.

As well as meeting the people affected by snakebite, and collecting crucial venom samples from many of the potential biters, Rom will employ the latest technology - a high-speed digital video camera which will allow him an un-presented look at exactly what is going on when a snake strikes.

### **Who's doing the biting?**

India has an estimated **280** species of snakes, of these a total of **65** are thought to be venomous. **15** of these species have been known to cause human deaths.

### **Rom's team will investigate the facts behind the figures for the following:**

- **Russell's Viper *Daboia russelii***: Mostly nocturnal and common throughout many parts India, preferring dense thorny hedgerows and scrub jungle. Like many vipers, it is an ambush predator relying on its exceptional camouflage to avoid detection. It stands its ground when approached and is often stepped on; bites to the feet and lower legs are not uncommon. Highly venomous, a bite delivers Cytolytic and necrotic toxins, which in turn can cause cell break down, spontaneous haemorrhaging and the loss of clotting agents in the blood.  
**Estimated fatalities per year - 25,000.**
- **Spectacled Cobra *Naja naja***: One of India's commonest snakes and found throughout the sub continent. Active by day and night, so often comes into contact with people. Highly venomous, a bite can deliver neurotoxic venom, which can bring on paralysis leading to respiratory failure and death.  
**Estimated fatalities per year - 15,000.**
- **Common Krait *Bungarus caeruleus***: Nocturnal and found throughout much of India, they mostly prey on other snakes including their own species. They possess some of the most potent venom found in any land snake. Their bite is often painless but delivers a complex, neurotoxic venom, causing paralysis, respiratory failure and if untreated, death. There are many recorded cases of kraits biting sleeping people, although the reason still remains a mystery and the subject of much folklore.  
**Estimated fatalities per year - 10,000.**
- **Saw Scaled Viper *Echis carinatus***: So named for its saw edged scales, which it rubs together when alarmed, creating a characteristic hissing sound. Common throughout the dry, open plains of much of India. It is mainly nocturnal, but will bask in the early morning sun, often bringing it into contact with people cutting grass and collecting firewood. It is said to possess one of the fastest strikes of any snake in the world.  
**Estimated fatalities per year - 5,000.**
- **King Cobra *Ophiophagus hannah***: The world's largest venomous snake, with recorded lengths of up to 18 feet. Rare and found mostly in thick primary rain forest. It preys almost exclusively on other snakes, and although far less venomous than the Spectacled Cobra it can inject huge quantities in a single bite. At present no antivenom exists for Indian King Cobra bites.

- **Pit Vipers:** India's largest group of venomous snake with fifteen known species found throughout the sub-continent. Although seldom fatal, these snakes are responsible for a huge number of bites to the hands of tea pickers and agricultural workers. No antivenom exists for many species of pit viper.

#### SPECIES REFERRED TO IN THE FILM

TC of first appearance	Latin name,	
10:06:24:00	King Cobra	<i>Ophiophagus hannah</i>
10:21:12	Spectacled Cobra	<i>Naja naja</i>
10:38:35:00	Kraits	<i>Bungarus sp</i>
10:41:32:00	Banded Kraits	<i>Bungarus fasciatus</i>
10:16:07:00	Russell's Viper	<i>Daboia russelii</i>
10:23:41:00	Saw Scaled Viper	<i>Echis carinatus</i>
10:46:17:00	Pit Vipers	<i>Crotalinae (Viper sub Family)</i>
10:50:28:00	Large Scaled Green Pit Viper	<i>Trimeresurus macrolepis</i>

#### PRODUCTION CREDITS

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