

transported to the laboratory, processed and identified based on morphological characters illustrated by Sen & Fletcher (1962).

Based on morphological features, ticks were identified as *Amblyomma* sp., which is in consonance with the findings of BurrIDGE *et al.* (2000) who evidenced *Amblyomma* ticks in snakes from Florida, additionally, the same species of tick, was evidenced in tortoises and monitor lizards. Hanson *et al.* (2007) observed snake paralysis in Southern Black Racer due to the bites of *Amblyomma rotundatum* from Florida. Tick infestation in snakes was also recorded by Sur *et al.* (2001) from West Bengal, India. They successfully treated tick infested snakes with deltamethrin. The snakes were found tick free and resumed to eat normally within a week after acaricidal therapy. Kiel *et al.* (2006) reported deaths in African vipers imported from Africa to Florida due to vomiting, diarrhoea, emaciation, convulsions, which were controlled only after elimination of ticks.

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VET BRIEF

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### Infestation of tick *Aponomma gibsoni* (Acari: Ixodidae) in Monitor Lizard *Varanus bengalensis* from Nagpur, Maharashtra

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Monitor Lizard or Water Monitor lizard (*Varanus bengalensis*) is very common in Vidarbha region of Maharashtra state and often killed by the tribal community for black magic or medicinal purposes and sold surreptitiously. Wild and captive reptiles are generally infected with large number of parasites, but cause little harm to their health unless they are under stress, nevertheless, signs of parasitism depends on kind of parasite and body tissue involved. Tick parasite poses a direct threat to the health causing unthriftiness, restlessness and anaemia resulting in serious health hazards. Ticks have a significant role as vectors of various pathogens *eg. Rickettsia honei* (the etiologic agent of Flinders Island spotted fever) has been transmitted by *Aponomma hydrosauri* a tick associated with reptiles (Stenos *et al.*, 2003). Hence, the present communication deals with the infestation of *A. gibsoni* in Monitor Lizard from Nagpur, Maharashtra.

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A rescued Monitor Lizard was screened for ectoparasitic infestation. Ticks were encountered in the dorsal part of tail, collected, processed and examined in the laboratory. The identification was performed based on morphological characters described by Sen & Fletcher (1962).

Monitor lizard was found to be infested with male *A. gibsoni* conforms the findings of Tendeiro *et al.* (1950) who recorded *A. sp.* from Portugal. *Aponomma hydrosauri* was recorded in Australian reptiles (Bull *et al.*, 1976) and *A. (Bothriocroton) glebopalma* and *Amblyomma glauerti* in monitor lizard (*V. glebopalma* and *V. glauerti*) from Western and Northern territories, Australia (Keirans *et al.*, 1994). Bayless & Simmons (2000) evidenced tick parasites on the Rock Monitor Lizard (*V. albigularis*) from Tanzania, Africa. *Aponomma hydrosauri* was associated with reptiles and transmitted *Rickettsia honei* (Stenos *et al.*, 2003). Pietzsch *et al.* (2006) also collected tick parasites, *viz., A. exornatum* and *A. latum*.

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VET BRIEF

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### Incidence of helminth ova in Indian Elephants *Elephas maximus* at Theppakadu, Nilgiris, Tamil Nadu

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Indian Elephants *Elephas maximus* are commonly used for timber logging, transportation of material and for religious purposes in Indian temples. Like other domestic animals the elephants are also exposed to many of the parasitic diseases which cause weight loss, loss in productivity, etc. In this manuscript helminths infecting wild elephants at Theppakadu, Nilgiris is reported and discussed.

A total number of 25 dung boluses were received from the forest veterinary officer, Theppakadu, Nilgiris during March 2004 for routine faecal examination. The faecal boluses were processed under standard centrifugal floatation method and the helminth eggs were identified based on their morphology.

Of the 25 dung boluses from as many elephants, 11 elephants (44%) had helminth infection including trematode (*Schistosoma* sp.), cestode and

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nematode infection. One elephant exhibited mixed infection consisting of cestode and strongyle eggs, while four, five and one elephant showed the presence of single infection of nematode, cestode and trematode (*Schistosoma* sp.), respectively. Among the nematodes *Strongyle* sp. eggs was found to be the predominant species (36.36%). A similar condition has been reported by Sundaram *et al.*, (1971). In cestodes, *Anoplocephala* sp. (9.09%) was encountered in one elephant, the same parasite was recorded in elephants by Chandrasekaran *et al.*, (1979) in Kerala. Among trematodes, *Bivitellobilharzia nairi* was recorded in one (9.09%) Elephant which was reported earlier by Sundaram *et al.*, (1972) and Islam (1994). The incidence of helminth recorded in the present study were also reported by Watve (1995) and Saseedharan *et al.* (2004). The low incidence of helminth infection among wild elephants might be due to lesser number of availability of intermediate hosts especially snail, etc among river banks which may be flushed out during heavy rainy season in dense forest and also the adverse environment temperature in the forest makes it unsuitable for intermediate host. However, the role of intermediate host in the transmission of helminth infection among elephants in Theppakdu, Nilgiris have to be studied in detail. The findings in the present study makes a call for routine deworming of elephants of all age groups which are kept in captive, semicaptive and free ranging systems.

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## Isolation, serogrouping and antibiogram of *Escherichia coli* of wild animals

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Vast literature is available on *Escherichia coli* based enteric infection in domestic animals, but works on this line in wild animals, seems to be meager. The present communication deals with isolation and serotyping of *E.coli* from wild animals and their sensitivity to antibacterial agents.

A total of seven faecal samples, one each of Gaur (*Bos gaurus*), Indian Giant Fruit Bat (*Pteropus giganteus*), Porcupine (*Atherurus macrourus*), Palm Civet (*Paradoxurus hermaphroditus*), Krait (*Bungarus caeruleus*) and two of Asian Elephants (*Elephas maximus*) from Betla National Park, Jharkhand and Veterinary College, Jammu were collected. *E. coli* were isolated and identified as per Edward & Ewing (1972) and sent to Central Research Institute, Kasauli, Himachal Pradesh for serotyping. The identified serogroups were tested for their sensitivity to eight antibacterials, *viz.*, amoxicillin, chloramphenicol, ciprofloxacin, erythromycin, gentamicin, enrofloxacin, tetracycline and kanamycin by single disc-diffusion method (Ellner, 1978).

*E. coli* was recovered from all the faecal samples. The three serogroups (O8, O9 and UT) of *E. coli* were isolated from Gaur. Two serogroups were isolated each from Asian Elephant (O32, O69), Fruit Bat (O61, O108) and Porcupine (O56, O147). One serogroup each was isolated from Palm Civet (O25) and Krait (O1).

The O8, O9 and UT all three *E. coli* sero groups isolated from Gaur were sensitive to ciprofloxacin. O9 was also sensitive for enrofloxacin and UT to gentamicin and enrofloxacin. Both O32 and O69 isolates of Asian Elephants were sensitive to chloramphenicol, ciprofloxacin, and enrofloxacin. The O69 also showed sensitivity to tetracycline. The O61 isolate of Fruit Bat was sensitive to all the antibacterials except erythromycin. Whereas, O108 was sensitive to chloramphenicol, ciprofloxacin and enrofloxacin. Amongst O56 and O147 *E. coli* isolates

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of porcupine, the O56 was sensitive to amoxicillin, chloramphenicol, ciprofloxacin and enrofloxacin, whereas, O147 in addition to these was also sensitive to erythromycin. The O25 *E.coli* isolate of Palm Civet was sensitive to all the antibacterials except kanamycin. O1 isolate of Krait was sensitive to amoxicillin, chloramphenicol, ciprofloxacin and enrofloxacin only.

The *E. coli* strains were highly sensitive to ciprofloxacin (100%) followed by chloramphenicol (90.9%) and enrofloxacin (90.9%). The sensitivity for other antibacterials was amoxicillin (45.4%), erythromycin (27.3%), gentamicin (27.3%) and tetracycline (27.3%). Only serogroup (O61) of *E. coli* isolated from Fruit Bat was sensitive to kanamycin (Table 1).

The O1, O8, O9, O25, O32, O56, O61, O69, O108, and O147 serotypes of *E. coli* has also been isolated from diarrhoeic and non-diarrhoeic faecal samples of domestic animals (Sarma & Boro, 1984; Abha, 2006; Shuchismita & Kashyap, 2006). O1 serotype was also recorded from the stool of human patients suffering from gastrointestinal disorder (Shah *et al.*, 1980). Savou (1965) isolated and described this serotype as highly virulent and invasive to fowl. The occurrence of common serotype in domestic and wild animals could be related with their shared food, fodder and habitat (Dubey & Rao, 1997).

The present findings indicate the expansion of *E.coli* host range in wild and their possible role as reservoir in near future and *vice versa*.

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