

any ulceration or mucoid exudates. A nick incision was given on the tip towards the bent portion of the fishing hook and was palpated through the neck muscles (Image 4<sup>w</sup>). Then the fishing hook was taken out by holding its tip with a needle holder. The wound was irrigated with 5% povidone-iodine lotion and left unsutured. The temperature and respiration rates were recorded to be 25°C and 3/min. 70ml of 5% DNS was administered intravenously in the radial vein (Image 5<sup>w</sup>). A bite block was kept inside the mouth to keep it open for better breathing (Image 3<sup>w</sup>). A comparative radiograph showed removal of foreign body (Image 7<sup>w</sup>). Post-operatively the turtle was kept inside a water trough containing a low level of water mixed with 5% povidone-iodine lotion. This practice was continued until the turtle was able to raise its head 45° with respect to its body, move its fin in a coordinated manner and regulate its weight in a water column. The turtle was given fish, earthworm and insects as food. The turtle recovered uneventfully and it was released to its natural habitat. Careful examination of the radiograph revealed presence of eight eggs indicating that the turtle was a gravid female (Image 8<sup>w</sup>).

#### Reference

**Bendivegna, F. (2004).** *Guidelines To Improve The Involvement of Marine Rescue Centre for Marine Turtles.* Naples aquarium, Tunis, 24-30pp.

**Acknowledgement:** Authors are thankful to L.A.K. Singh, Senior Research Officer and K.L. Purohit, Range Officer O/o Chief Wildlife Warden, Orissa, Bhubaneswar for identification of the turtle.



VET BRIEF

ZOOS' PRINT JOURNAL 22(11): 2897

### Paraplegia in a Tiger *Panthera tigris*

I. Nath<sup>1</sup>, S.K. Panda<sup>2</sup>, L.M. Mohapatra<sup>3</sup>, Monalisa Sahoo<sup>4</sup>, P.K. Roy<sup>5</sup> and A.K. Mishra<sup>6</sup>

<sup>1</sup> Associate Professor, Department of Surgery; <sup>2</sup> Assistant Professor, <sup>4</sup>P.G. Scholar, Department of Pathology; <sup>3</sup> Associate Professor, LPM, Orissa Veterinary College, Bhubaneswar, Orissa 751003, India  
<sup>5</sup> Senior Veterinary Officer; <sup>6</sup> Assistant Director, Nandan Kanan Zoo, Bhubaneswar, Orissa, India  
Email: <sup>1</sup> indravet@yahoo.co.in

plus web supplement of 1 page

A male tiger Rohit aged 13yr of Nandankanan Zoo was unable to bear weight on his hind limb. He was treated with powdered oral calcium tablets (Shell-cal, 500mg, 4no), nervine tonics (Neurobion tablets, vitamin B complex with B12, 2 no), oral analgesic (Tramadol hydrochloride, 100mg, 5 no) offered in beef for five days. There was no improvement and the tiger developed wounds due to limb dragging. It was decided to examine the hind quarters both physically and radiologically. On 03.01.2006 the tiger was darted with a mixture of 1.2mg atropine sulphate, 200mg xylazine hydrochloride and 400mg ketamine hydrochloride using a pressure gun (Image 1<sup>w</sup>).

After 12min the animal was lifted on a tarpaulin strap and brought out of his pen. Temperature, respiration and heart rate were recorded to be 99.6°F, 17/min and 98/min, respectively (Image 2<sup>w</sup>). Radiograph of both the limbs in lateral and dorsal-plantar views were taken starting from stifle joints to digits (Images 3<sup>w</sup> & 4<sup>w</sup>). A ventro-dorsal view of both the hip joints was also taken (Image 5<sup>w</sup>). Blood samples were collected for haematological and blood protozoan examination. Ringers Lactate 500ml and DNS 5% 500ml was administered intravenously. Neurobion injection (vitamin B complex with B12) 3ml x 4 ampoules and Tramadol hydrochloride injection 100mg, 1ml x 2 ampoules were injected

<sup>w</sup> See Images 1-7<sup>w</sup> in the web supplement at [www.zoosprint.org](http://www.zoosprint.org)

Manuscript 1713a; © ZOO; Date of publication 21 October 2007;  
Received 29 January 2007; Revised received 11 June 2007;  
Finally accepted 02 September 2007

intramuscularly. The tiger was revived from anesthesia by i/v administration of 2ml (20mg) of yohimbine hydrochloride (Antagozil) (Image 6<sup>w</sup>). Radiographs did not reveal any fracture or dislocation of the bones. Blood examination for protozoan parasites was negative. The haemoglobin, total leukocyte count, neutrophilic count and eosinophilic count were recorded to be 12g/dl, 9300/mm<sup>3</sup> of blood, 80% and 10% respectively. Ceftriaxone sodium 1g (Monocef) and Neurobion 10ml were administered intramuscularly once daily for five days with a dart gun. Thereafter, cartigen, glucosamine sulphate (Pharmed Ltd., Mumbai-1) 500mg x4, Neurobion (vitamin B complex with B12) two tablets and multivitamin tablets with trace mineral *i.e.* vitA, vitD, vitB1,2,6,12, vitE, ferrous sulfate, copper sulphate, manganese sulfate and zinc sulfate, Supradyn (Nicholas Lab., two no.) in beef was administered for 15 days. The tiger started bearing weight and walking on his hind limbs (Image 7<sup>w</sup>). After ruling out infection, inflammation, traumatic, toxic and parasitic causes, it was concluded that the tiger was suffering from nutritional problems, hence multivitamin with trace mineral tablets were administered. Eldridge (1997) stated that it is difficult to determine what specific mineral is in imbalance when examining an animal's symptoms, because the clinical signs for one mineral imbalance can be exactly the same as for several other minerals. Again deficiencies of minerals and excess intake of minerals may present the same symptoms. In late 1980 seven cheetah cubs of Zoological Institution in Southwestern United States suffered from various levels of ataxia and hind limb paralysis which were successfully treated by both injectable and oral copper supplement. However, copper deficiency, a nutritional problem is usually considered in carnivorous animals on a diet primarily of poultry, which may be particularly vulnerable to copper related deficiency. In this case, however, the tiger was maintained on beef.

#### REFERENCE

**Eldridge, R. (1997).** Maintaining mineral balance. *LIOC-ESCF Newsletter* 41(2).

**ACKNOWLEDGEMENT:** Authors are thankful to the Director Nandan Kanan Zoo for permitting them to undertake the work.



VET BRIEF

ZOOS' PRINT JOURNAL 22(11): 2897-2898

### *Amblyomma* tick infestation in Indian Rat Snake *Ptyas mucosa* from Chandrapur district of Maharashtra state

L.J. Harkare<sup>1</sup>, B.S. Baviskar<sup>2</sup>, P.J. Gawande<sup>3</sup>, P.S. Bankar<sup>4</sup>, S.V. Deshmukh<sup>5</sup>, D.K. Maske<sup>6</sup> and A.K. Jayraw<sup>7</sup>

<sup>1</sup>Patrakar Saha Niwas, B-3/1, Civil Lines, Amravati Road, Nagpur, Maharashtra 440001, India; <sup>2,3,4,5,6,7</sup> Department of Parasitology, Nagpur Veterinary College, M. A. F. S. U., Seminary Hills, Nagpur, Maharashtra 440006, India  
Email: <sup>2</sup> drbaharaviskar@rediffmail.com; <sup>3</sup> drpriyagawande@gmail.com; <sup>4</sup> drps\_bankar@rediffmail.com; <sup>5</sup> shubha23@rediffmail.com; <sup>6</sup> drbaharaviskar@gmail.com (corresponding auhtor); <sup>7</sup> jayrawant1@rediffmail.com

Snakes are commonly affected by bewildering variety of parasites resulting in severe health hazards, amongst which ticks play a pivotal role in morbidity and mortality. Tick infestation not only results in anaemia, owing to their blood sucking habit, but also transmits certain blood borne diseases. Information is lacking on tick infestation in snakes from Maharashtra. Hence, the present communication documents the first report on occurrence of *Amblyomma* ticks in a Rat Snake (*Ptyas mucosa*) from Chandrapur district of Maharashtra state.

An 8ft-long female Rat Snake rescued from Chandrapur (Maharashtra) was observed with heavy tick infestation all over the body and beneath the scales. Ticks were removed manually by applying alcohol on exposed part of the body and were collected in a specimen bottle,

Manuscript 1782; © ZOO; Date of publication 21 October 2007;  
Received 20 May 2007; Finally accepted 25 September 2007

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.

#### References

- BurrIDGE M.J., L.A. Simmons & S.A. Allan (2000). Introduction of potential heartwater vectors and other exotic ticks into Florida on imported reptiles. *Journal of Parasitology* 86(4): 700-704.
- Hanson B.A., P.A. Frank, J.W. Mertins & J.L. Corn (2007). Tick paralysis of a snake caused by *Amblyomma rotundatum* (Acari: Ixodidae). *Journal of Medical Entomology* 44(1): 155-157.
- Kiel, J., R.M. Alarcon, J.E. Parker, J. Vivekananda, Y.B. Gonzalez, L.J.V. Stribling & C.J. Andrews (2006). Emerging tick-borne disease in African vipers caused by a cowdria-like organism. *Annals of the New York Academy of Sciences* 1081(1): 434-442.
- Sen, S.K. & B. Fletcher (1962). *Veterinary Entomology and Acarology for India*. 1<sup>st</sup> edition. ICAR, New Delhi.
- Sur S.K., G.L. Ghosh & D. Chatterjee (2001). Use of deltamethrin on tick infested snakes. *Zoos' Print Journal* 16(1): 410.

**Acknowledgement:** The authors are thankful to the Associate Dean, Nagpur Veterinary College, Nagpur for providing the necessary facilities.



VET BRIEF

ZOOS' PRINT JOURNAL 22(11): 2898

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

L.J. Harkare<sup>1</sup>, P.J. Gawande<sup>2</sup>, B.S. Baviskar<sup>3</sup>, B.R. Latha<sup>4</sup>, R. Hippargi<sup>5</sup>, A.K. Jayraw<sup>6</sup> and D.K. Maske<sup>7</sup>

<sup>1</sup>Patrakar Saha Niwas, B-3/1, Civil Lines, Amravati Road, Nagpur, Maharashtra 440001, India; <sup>2,3,4,5,6,7</sup> Department of Parasitology, Nagpur Veterinary College, M. A. F. S. U., Seminary Hills, Nagpur, Maharashtra 440006, India  
Email: <sup>2</sup> drpriyagawande@gmail.com; <sup>3</sup> drbaharaviskar@rediffmail.com;  
<sup>4</sup> lathanri@yahoo.com; <sup>5</sup> appuratna@rediffmail.com; <sup>6</sup> jayrawanant1@rediffmail.com;  
<sup>7</sup> drpriyagawande@gmail.com (corresponding author)

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.

Manuscript 1783; © ZOO; Date of publication 21 October 2007;  
Received 20 May 2007; Finally accepted 28 September 2007

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*.

#### References

- Bull, M. & G.J. Sara (1976). The population structure of an Australian reptile tick, *Aponomma hydrosauri* (Acari: Ixodidae). I. Evidence from an esterase polymorphism. *Journal of Medical Entomology* 13(2): 137-142
- Bayless, M.K. & L.A. Simmons (2000). Tick parasites on the rock monitor lizard (*Varanus albigularis* Daudin, 1802) of Tanzania, Africa. *African Journal of Ecology* 38(4): 363-364.
- Keirans, J.E., D.R. King & R.D. Sharrad (1994). *Aponomma* (Bothriocroton) *glebopalma*, n. subgen., n. sp., and *Amblyomma glauerti* n. sp. (Acari: Ixodidae), parasites of monitor lizards (Varanidae) in Australia. *Journal of Medical Entomology* 31(1): 132-147.
- Pietzsch, M., R. Quest, P.D. Hillyard, J.M. Medlock & S. Leach (2006). Importation of exotic ticks into the United Kingdom via the international trade in reptiles. *Journal of Experimental and Applied Acarology* 38(1): 59-65.
- Sen, S.K. & B. Fletcher (1962). *Veterinary Entomology and Acarology for India*. 1<sup>st</sup> edition. ICAR, New Delhi.
- Stenos, J.S. Graves, V.L. Popov & D.H. Walker (2003). *Aponomma hydrosauri*, the reptile-associated tick reservoir of *Rickettsia honei* on Flinders Island, Australia. *American Journal of Tropical Medicine and Hygiene* 69(3): 314-317.
- Tendeiro, J. (1950). Ixodidae of Portuguese Guinea: *Aponomma haili* n. sp., monitor lizard parasite. *Annals of the Institute of Tropical Medicine, Lisbon* 7: 135-154.

**Acknowledgements:** The authors are thankful to the Associate Dean, Nagpur Veterinary College, Nagpur for providing the necessary facilities.



VET BRIEF

ZOOS' PRINT JOURNAL 22(11): 2898-2899

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

K. Arunachalam<sup>1</sup>, M. Raman<sup>2</sup> and T.J. Harikrishnan<sup>2</sup>

<sup>1,2</sup> Department of Veterinary Parasitology, Veterinary College and Research Institute, Namakkal, Tamil Nadu, India  
Email: <sup>1</sup> hemacha@rediffmail.com

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

Manuscript 1585; © ZOO; Date of publication 21 October 2007;  
Received 01 July 2006; Revised received 21 August 2007;  
Finally accepted 15 September 2007