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Short Communication

A CASE REPORT OF ANCYLOSTOMOSIS IN A SLOTH BEAR (*MELURSUS URSINUS*) IN CENTRAL MAHARASHTRA

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SUMMARY

The sloth bear (*Melursus ursinus*), a key species in India's wildlife, faces significant threats from various gastrointestinal parasitic infections, including *Ancylostoma* spp. Recent studies highlight the varying prevalence rates of these parasites in both wild and captive populations. Parasitic infections, often unnoticed, pose serious health risks such as tissue damage and compromised immunity, leading to mortality in severe cases. Effective conservation strategies necessitate comprehensive health monitoring, including post-mortem examinations and regular fecal screenings. Understanding the epidemiology of these infections is crucial for implementing targeted prevention and control measures, ensuring the long-term survival and ecological stability of sloth bears and their habitats.

Keywords: *Ancylostoma*, Gastrointestinal parasitic diseases, Post-mortem, Sloth bear (*Melursus ursinus*)

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Recently, a dead sloth bear of unknown cause was brought for post-mortem examination at the Department of Veterinary Pathology of Nagpur Veterinary College, MAFSU, Nagpur, where faecal sample from the rectum was collected in a wide-mouth bottle with 5% formalin and intestinal washing was taken in a container filled with normal saline solution (NSS) for parasitological examination at the Veterinary Parasitology laboratory. Fecal sample was processed using the standard parasitological sedimentation technique (Zajac *et al.*, 2012). On microscopic examination of the sediment under 100X, the sample was positive for the presence of ova of *Ancylostoma* spp. While examining intestinal washings, the presence of a few worms measuring approximately 0.5-1.5 cm long. After placing the worms in a petri dish, 10% boiling ethyl alcohol was poured into the petri dish. Subsequently, the worms were subjected to the clearing agent lactophenol to clear their morphology for identification. Careful microscopic examination of the worm after lactophenol clearing revealed that, the ventral margin of buccal capsule having 3 teeth on either side whereas a pair of triangular dorsal teeth was observed on the depth of capsule which are similar with the characteristics of *Ancylostoma* spp. mentioned in Soulsby (1982).

Sloth bears are prone to gastrointestinal parasitosis mainly because of their feeding habits. Veeraselvam *et al.* (2013) has reported the highest prevalence of strongyle spp. (32%) whereas least prevalence of *Ancylostoma* spp. (4%) in captive sloth bears. Microscopically, it is very difficult to distinguish the species of *Ancylostoma* infecting the host. Baylis and Daubney (1922) reported four hookworm species, namely *Ancylostoma brasiliense*, *A. malayanum*, *A. ceylanicum* and *A. caninum*, in captive sloth bears from India. Baylis and Daubney (1922) have also reported *Ancylostoma malayanum* from Himalayan black bears in India and Ceylon (Lane, 1916) and from a captive sun bear from India. Similarly, two species of *Ancylostoma* namely *A. caninum* and *A. tubaeforme* have been detected in black bears by Foster *et al.* (2004). Recently, Manjunatha *et al.* (2019) reported a 9.41% prevalence of *Ancylostoma* spp. eggs from the sloth bears in Wildlife SOS, Bear Rescue Centre, BBP, Bangaluru.

Few necropsy studies have been conducted on fatal parasitic infections in sloth bears. The majority of research relies on examining faecal samples from both wild and captive animals (Chhabra and Pathak, 2013). *Ancylostoma caninum* was identified in the necropsy of a sloth bear by Rao and Acharjyo (1984), whereas *Ancylostoma malayanum* was found in the black bears of the Nandankanan Zoo by Islam and Nashiruddullah (2000). Morphologically it is very difficult to know the infecting species of *Ancylostoma*. Few studies have been done for molecular identification of *Ancylostoma* species where few cases other hookworms like *Uncinaria* spp. have been recorded. The hookworm's species like *Uncinaria yukonensis* and *U. rauschi* has been found in black and grizzly bears by Olsen (1968). Additionally, brown bears have been found to harbor *U. stenocephala* (Rogers and Rogers, 1976).

Sloth bears are apex predators in their ecosystem, they help to regulate prey populations and maintain stability in the ecosystem. However, their susceptibility to parasites underscores their vulnerability to environmental changes and human impact. Further studies on parasitic

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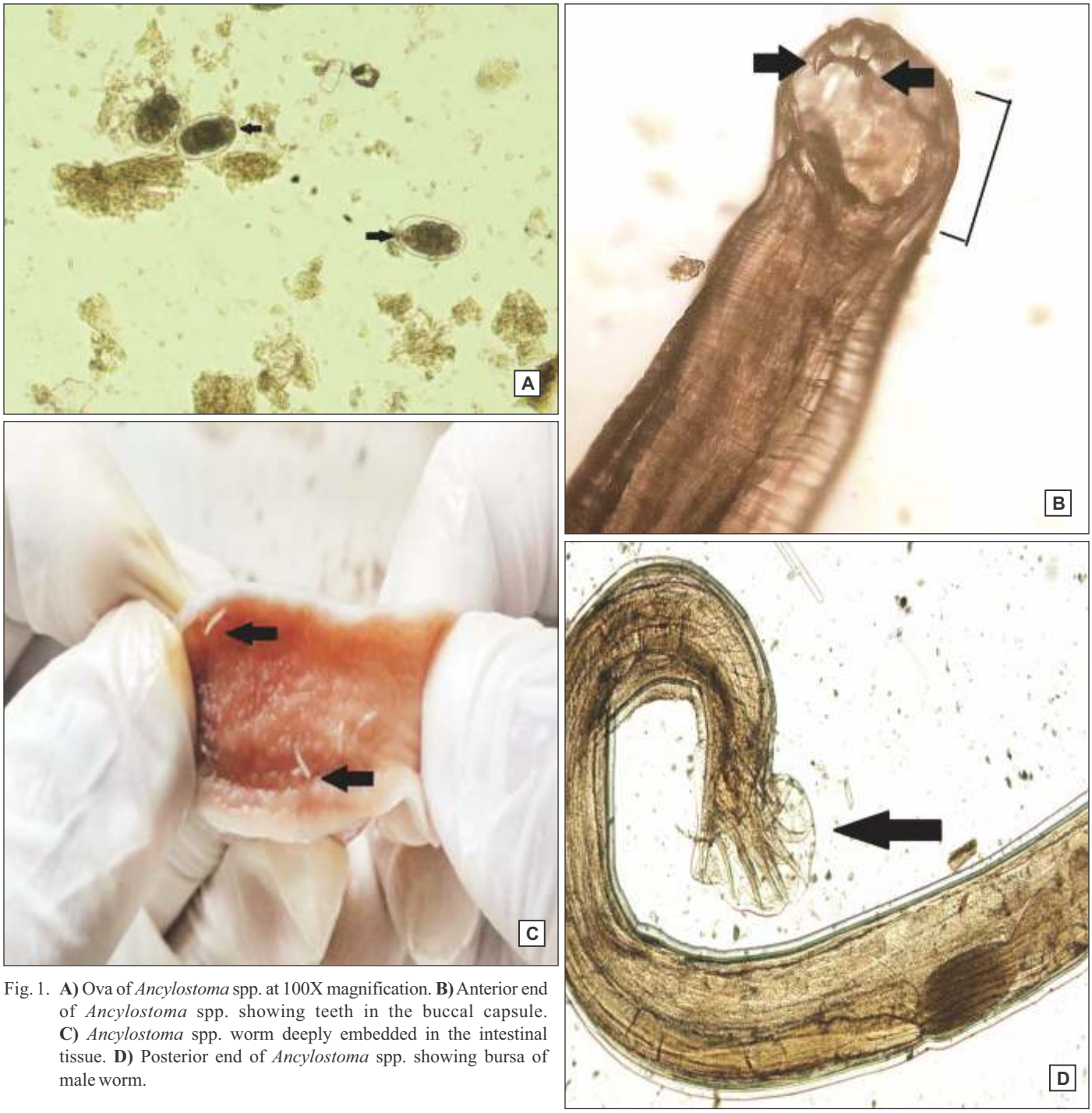

Fig. 1. **A)** Ova of *Ancylostoma* spp. at 100X magnification. **B)** Anterior end of *Ancylostoma* spp. showing teeth in the buccal capsule. **C)** *Ancylostoma* spp. worm deeply embedded in the intestinal tissue. **D)** Posterior end of *Ancylostoma* spp. showing bursa of male worm.

infections are essential to understand the epidemiology of parasitism and its prevention. For effective conservation, more emphasis should be placed on health monitoring programs integrating post-mortem examinations, field observations and habitat assessments. This holistic approach is vital for understanding and mitigating threats, ensuring effective conservation strategies for sloth bears and other wildlife. However, a systematic preventive and control program for wild animals can be implemented by regular, ongoing faecal sample screening and recurring animal deworming.

REFERENCES

Baylis, H.A. and Daubney, R. (1923). A further report on parasitic nematodes in the collection of the Zoological Survey of India. *Rec. Zool. Surv. India.* **25**: 551-578.

Chhabra, M.B. and Pathak, K.M.L. (2013). Parasites and parasitic diseases of wildlife in India. 2. Carnivores and birds. *Indian J. Anim. Sci.* **83(6)**: 567-578.

Foster, G.W., Cunningham, M.W., Kinsella, J.M. and Forrester, D.J. (2004). Parasitic helminths of black bear cubs (*Ursus americanus*) from Florida. *J. Parasitology.* **90(1)**: 173-175.

Lane, C. (1916). The genus *Ancylostoma* in India and Ceylon. *Indian J. Med. Res.* **4(1)**: 74

Manjunatha, V., Rout, M., Sha, A.A., Byregowda, S.M. and Joseph, T. (2019). Coprological analysis for estimating prevalence of gastrointestinal parasites in captive sloth bears (*Melursus ursinus*). *Indian J. Anim. Res.* **53(7)**: 963-966.

Mir, A.Q., Dua, K., Singla, L.D., Sharma, S. and Singh, M.P. (2016). Prevalence of parasitic infection in captive wild animals in Bir Moti Bagh mini zoo (Deer Park), Patiala, Punjab. *Vet. World.* **9(6)**: 540.

Olsen, O.W. (1968). *Uncinaria rauschi* (Strongyloidea: Nematoda), a new species of hookworms from Alaskan bears. *Canadian J. Zool.* **46(6)**: 1113-1117.

Parsani, H.R., Momin, R.R., Maradia, M.G. and Singh, V. (2001). A survey of gastro-intestinal parasites of captive animals at Rajkot Municipal Corporation Zoo, Rajkot, Gujarat. *Zoos'print J.* **16(10)**: 604-606.

Rao, A.T. and Acharjyo, L.N. (1984). Diagnosis and classification of common diseases of captive animals at Nandankanan zoo in Orissa (India). *Indian J. Anim. Health.* **23(2)**: 147-152.

Rao, A.T. and Acharjyo, L.N. (1995). Causes of mortality in carnivores other than felids at Nandankanan zoo. *Indian Vet. J.* **72(9)**: 918-921.

Rogers, L.L. and Rogers, S.M. (1976). Parasites of bears: a review. *Bears Biol. Mgt.* **3**: 411-430.

Stiles, C.W. and Baker, C.E. (1934). Key-catalogue of parasites reported for Carnivora (cats, dogs, bears, etc.) with their possible public health importance. *National Institute of Health Bulletin.* **163(2)**: 913-1223.

Thawait, V.K., Maiti, S.K. and Dixit, A.A. (2014). Prevalence of gastro-intestinal parasites in captive wild animals of Nandan Van Zoo, Raipur, Chhattisgarh. *Vet. World.* **7(7)**: 448-451.

Zajac, A.M. and Conboy, G.A. (2012). Fecal examination for the diagnosis of parasitism. *Vet. Clin. Parasitol.* **8**: 72-73.

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