Reprint:
INDIAN JOURNAL OF ANIMAL HEALTH,
Vol. 27, No. 2, December, 1988

Arun K. Yadav, Veena Tandon and Bishnupada Roy
Department of Zoology,
North-Eastern Hill University,
Shillong 793014 (India)

The occurrence of adult Setaria cervi, a filarial nematode of goats, was reported for the first time from goats of Tripura (India). The report secures its reality as an important nematode in goats, causing persistent panniculus castaneus. The possible role of alternative goat is discussed.

The filarial nematode, Setaria cervi (Rudolphi, 1819) Baylis, 1936 (Oxyuracea: Setariidae), though well known as a common parasite in the peritoneal cavity of cattle and buffaloes, was also sporadically reported from other bovidae hosts such as horses (Gupta & Katji, 1978) and goats (Hindustani et al., 1965) from several parts of the world. Dadomi's (1954) report on helminth infections in Liverpool in Assam also includes a record of Setaria species in goats but the name of the species is not indicated. In the survey reports (ref. Tables II & III p 541, 542) based on post mortem and histological examinations of goats Setaria cervi (Björk, 1925) is one of the predominant fish-bone shaped adult female nematode found in the abomasum of adult goats.

FILARIAL INFECTIONS IN GOATS OF TRIPURA: OCCURRENCE OF
SETARIA CERVI (RUDOLPHI, 1819) BAYLIS, 1936

During 1987 in Tripura, a northeastern State of India, carried out a survey in March, 1987, the survey of 382 goats at the abattoirs in Agartala and Duttapukur (24°22'N-92°10'E) revealed the presence of adult female nematode of Setaria cervi and three goats respectively. It is worth mentioning here that out of 450 cattle examined, no case was found in the current survey in the state. 92.1% (n=20.4%) of them harboured Setaria species. The nematodes collected were fixed in 70% ethanol and cleared in a glycerine-alcohol solution. The detailed morphological features of the worms were indentified as adults of Setaria cervi on account of the presence of a characteristic rounded and dorsoventrally elongated penial ring and a short conical tail possessing a pair of caudal appendages (Baylis, 1936).

The report seems to be of veterinary significance since in abomasal hosts like horses, sheep and goats, various pathogenic manifestations like cytological alterations and lymphocytic infiltration are known to occur due to account of erratic migration of the juveniles of Setaria species. (Innes & Shibbo, 1952). The life cycle of most of the species of Setaria is unknown; however, in those where it is known, different species of mosquitoes such as Aedes aegypti, A. punctatissima, Culex species and Anopheles species are implicated as vectors of microfilariae in different hosts (Solsby, 1963). In the area under study, goats are...

To whom correspondence should be addressed.
FILARIAL INFECTIONS IN GOATS OF TRIPURA: OCCURRENCE OF 
SETARIA CERVI (RUDOLPHI, 1819) BAYLIS, 1936

ARUN K. YADAV, VEENA TANDON* AND BISHNUPADA ROY

Department of Zoology,
North-Eastern Hill University,
Shillong 793 014 (India)

The occurrence of adult Setaria cervi, a filarioid worm of bovine hosts is reported for the first time from goats of Tripura (India). The report seems to be of veterinary significance since Setaria infection in abnormal hosts is known to cause serious pathogenic manifestations. The possible source of infection to goats is discussed.

The filarioid nematode, Setaria cervi (Rudolphi, 1819) Baylis, 1936 (Onchocercidae: Setariinae), though well known as a common parasite in the peritoneal cavity of cattle and buffaloes, has also been sporadically reported from other herbivorous hosts such as horses (Gupta & Kalia, 1978) and goats (Srivastava et al., 1985) from several parts of the world. Endrejat’s (1964) report on helminth infections in livestock in Assam also includes a record of Setaria species in goats but the basis of this record is not indicated. In the survey reports (ref. Tables II & III p.541,542) based on post mortem and faecal examinations of goats Seteria is not mentioned. The present communication is the first report on the occurrence of adult filarial nematode, S. cervi in goats of India.

During a survey of helminth parasite spectrum in the livestock of Tripura, a north-eastern State of India, carried out between April, 1986 to March, 1987, the autopsy of 152 goats at the abattoirs in Agartala (23°44'N—91°17'E) and Dharmanagar (24°23'N—92°10'E) revealed the presence of Setaria worm infections in the peritoneal cavity of five and three goats, respectively. It is worth mentioning here that out of 450 cattle examined in a concurrent survey in the state, 92 (i.e., 20.4%) of them harboured Setaria species. The nematodes collected were fixed in 70% ethanol and cleared in a glycerin-alcohol solution. On studying their detailed morphological features the worms were indentified as adults of S. cervi on account of the presence of a characteristically raised and dorsoventrally elongated peribuccal ring and a short conical tail possessing a pair of caudal appendages (Baylis, 1936).

The report seems to be of veterinary significance since in abnormal hosts like horses, sheep and goats, serious pathogenic manifestations like cerebrospinal nematodiiasis and lumbar paralysis are known to occur on account of erratic migration of the juveniles of Setaria species (Innes & Shoho, 1953). The life cycle of most of the species of Setaria is unknown; however, for those where it is known, different species of mosquitoes such as Aedes aegypti, A. pennaensis, Culex species and Anopheles species are implicated as vectors of microfilariae in different hosts (Soulsby, 1982). In the area under study, cattle are

* To whom all correspondence should be addressed.
maintained in close association with goats and it seems that the transmission of the infective stages to goats is probably accomplished from filaria-infected cattle of the area through *Anopheles* vector, of which as many as ten species are reported to occur in the region (Misra & Dhar, 1985). A further investigation deserves in this context on the incidence of animal filariosis in the region, together with an intensive study of the biology and ecology of its vectors. The study will gain significant informations needed prior to implementing any livestock management programme in this region.

**ACKNOWLEDGMENTS**

This study was supported by a research grant from the North Eastern Council, and partly also the one under the Himalayan Eco-Development Programme of Government of India, to VT. Thanks are due Prof. K. Chatterjii, Head, Department of Zoology, NEHU for providing laboratory facilities.

**REFERENCES**


(Received for publication—23.4.1988)