Trichostrongylus longispicularis in Cattle from California

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In December 1961 four of the feeder cattle autopsied in an anthelmintic trial at the University of California six days post-treatment were found to have harbored the nematode Trichostrongylus longispicularis. The animals had been previously purchased from a ranch in the Orland area, Glenn County, California. The cattle had been ranged on irrigated pasture. The original source of the cattle is not known.

It is believed that this is the first report of the natural occurrence of T. longispicularis in cattle in California.

One year after the description of T. longispicularis from sheep in Australia by Gordon (1933), Andrews (1934) first reported the same species from the abomasum of cattle in Jeanerette, Louisiana and on an additional specimen sent to him from the abomasum of a cow from Florida (Andrews, 1935). The third report of the occurrence in the United States of this nematode appeared in 1956. Animals from a New Mexican herd of barbary sheep, an exotic animal but resident in the United States for years, bore T. longispicularis at postmortem (Allen et al., 1956). Georgia and Mississippi are listed by Becklund (1958) and Knight (1962) respectively as the other areas of America in which T. longispicularis has been isolated from cattle.

Gordon (1933), Roberts (1938, 1939), and Sommerville (1956) record the presence of T. longispicularis from Australia. Sommerville (op. cit.) stated that it was common in certain areas and can occur as a pure infection.

Rose (1959, 1960) added T. longispicularis to the list of gastro-intestinal parasites of cattle in Britain.

Lai and Palmas (1957) and Palmas (1957) were the first to publish the incidence of T. longispicularis in continental Europe. They encountered T. longispicularis in cattle at various times of the year in Sardinia. However, it apparently had been recognized earlier in Europe as Sarwar, (1956) states that Dr. R. Sivieretra of the Institute of Parasitology and Parasitic Diseases, Utrecht, Holland, had showed him specimens which had been collected from Holland.

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Sarwar (1956), as Gordon (op. cit.), lists the sheep as a host. He includes *T. longispicularis* among the parasites of ruminants from the Indo-Pakistan subcontinent and referred to Schulz and Kadenatazi (1950) who list the Far Eastern goral as a host in Russia.

**California Specimens**: The worm burden of the four cattle ranged from 27,500 to 96,400 nematodes in the abomasum and 5,270 to 54,600 trichostongyles in the small intestines. The number was determined by a sample dilution method.

*Ostertagia ostertagi* was the predominant species in the abomasum, while *Cooperia punctata* was the nematode which occurred in the largest number in the small intestines. *Cooperia oncophora* in the small intestines and *Trichostrongylus axel* in the abomasum were present in small numbers. *T. longispicularis* was only sparingly represented. Thirty-three specimens of *T. longispicularis* were identified from 1185 male trichostongyles randomly selected from the four animals. One male worm was encountered in the abomasal sample of one of the infected cattle. No attempt to speciate females was made.

The measurements of the 33 California specimens are as follows: total length 4.7 to 6.5 mm, mean 5.7 mm; body width immediately anterior to bursa 73.3 to 126.7 microns, mean 105 microns; width of head 6.7 to 13.3 microns, mean 10.1 microns; length of right spicule 163 to 193 microns, mean 176 microns; length of left spicule 163 to 200 microns, mean 184 microns; and length of gubernaculum 83 to 103 microns, mean 93 microns. The measurements were in agreement with previous reports.

**Literature Cited**


