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Longistrongylus curvispiculum (Nematoda: Trichostrongyloidea) in Free-ranging Exotic Antelope in Texas

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ABSTRACT: *Longistrongylus curvispiculum* was recovered from free ranging sable (*Hippotragus niger*), addax (*Addax nasomaculatus*) and biesa oryx (*Oryx beisa*) on two ranches in central Texas (USA). These nematodes represented a small portion of the total abomasal worm burden dominated by *Haemonchus contortus*. Female *L. curvispiculum* easily could be confused with other ostertaginae, but the spicules of the males were diagnostic.

Key words: *Longistrongylus curvispiculum*, *Hippotragus niger*, *Addax nasomaculatus*, *Oryx beisa*, host range, geographic range.

A sable (*Hippotragus niger*) calf from a ranch in the southern Edwards Plateau of Texas, USA (29°44′N by 98°50′W) was submitted to the Texas Veterinary Diagnostic Laboratory on 19 April 1990 for post mortem examination. An estimated 200 adult *Longistrongylus curvispiculum* were recovered from the abomasum. An adult addax (*Addax nasomaculatus*) was found dead on an exotic game ranch in the northern Edwards Plateau (32°10′N by 97°50′W) (290 km from the other facility) on 15 October 1992 and *L. curvispiculum* were recovered from the abomasal contents.

A fecal specimen was obtained from a beisa oryx, *Oryx beisa*, in April 1990, which had signs of gastrointestinal parasitism, on the first ranch. The feces were incubated at 27 C at approximately 85% relative humidity in a Mason jar for 2 wk. Approximately 5,000 of the resulting larvae were administered per os to a parasite-free lamb (*Ovis aries*) and to a kid (*Capra hircus*) which were euthanitized by a captive bolt pistol (Cash X, Accles & Shelvoke, Ltd. Birmingham, England) and carotid exsanguination, 35 days post-infection. The complete gastrointestinal contents of the lamb and kid were examined for nematodes. Sixty *L. curvispiculum* were recovered from the kid and 145 were recovered from the lamb.

Voucher specimens were submitted to the U.S. National Helminth Collection from the lamb (No. 81213) and from the kid (No. 81214); no other specimens were submitted as the worms were damaged and fragmented. Both ranches had other exotic antelope and cervid species; domestic cattle also were kept at one ranch. The infected animals were maintained in pastures ranging in size from 2 to 330 ha with a few to several hundred other grazing animals. All infected animals were born on the ranch where the parasites were recovered. However, there was a history of movement of animals between the two facilities several years prior to finding *L. curvispiculum*.

Longistrongylus is native to eastern Africa (Gibbons, 1973, 1977). The reported host range includes Grant's gazelle (*Gazella granti*), Thompson's gazelle (*Gazella thomsonii*), impala (*Aepyceros melampus*), topi (*Damaliscus korrigum*), wildebeest (*Connochaetes taurinus*), goats, and sheep (Gibbons, 1973; Gibbons and Khalil, 1976). Gibbons and Khalil (1977) reported the parasite in England in a scimitar-horned oryx (*Oryx tao*).

Among the potential hosts on the Texas ranches with the parasite were Thomson's gazelle, wildebeest, and scimitar-horned oryx. They were grazing together with, or on pastures previously inhabited by, the infected animals. Both ranches also had several other antelope species.

The increased interest in ranch-raised exotics where the animals are comingled with various domesticated and exotic species theoretically would allow for the proliferation of parasites with direct life cycles. *Longistrongylus* easily could be overlooked during post mortem examinations as all abomasal nematode infections were mixed and *Haemonchus con-*

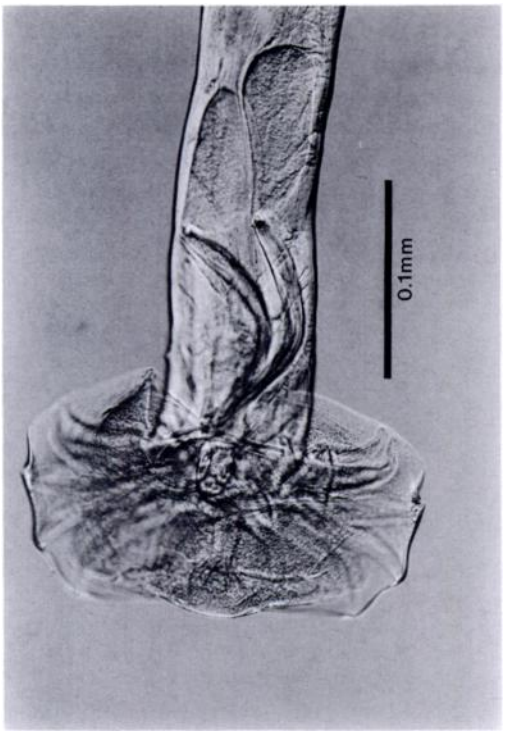

FIGURE 1. Bursa and spicules of *Longistrongylus curvispiculum*. Note the nearly 90° curve in the mid-shaft of the spicules.

tortus was the dominant species. Female *Longistrongylus* are typical ostertaginae and difficult to identify to species. But a lateral view of its curved spicules makes male identification relatively simple (Fig. 1). Where and when the parasite was introduced to Texas is unknown. It probably has been present for several years and its presence is further indication of results associated with the cavalier translocation of exotic species.

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