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NEW HOST AND GEOGRAPHIC RECORDS FOR *PROTOSTRONGYLUS STILESI* AND *PARELAPHOSTRONGYLUS ODOCOILEI* IN DALL'S SHEEP FROM THE MACKENZIE MOUNTAINS, NORTHWEST TERRITORIES, CANADA

SUSAN KUTZ, Department of Veterinary Microbiology, Western College of Veterinary Medicine, 52 Campus Drive, Saskatoon, SK, Canada S7N 5B4
ALASDAIR VEITCH, Department of Resources, Wildlife, and Economic Development, Box 130, Norman Wells, NT, Canada X0E 0V0
ERIC HOBERG, United States Department of Agriculture, Biosystematics and National Parasite Collection Unit, BARC East No. 1180, 10300 Baltimore Ave., Beltsville, MD, USA 20705
BRETT ELKIN, Department of Resources, Wildlife, and Economic Development, #600 5102 50th Ave., Yellowknife, NT, Canada X0E 0V0
EMILY JENKINS, Department of Veterinary Microbiology, Western College of Veterinary Medicine, 52 Campus Drive, Saskatoon, SK, Canada S7N 5B4
LYDDEN POLLEY, Department of Veterinary Microbiology, Western College of Veterinary Medicine, 52 Campus Drive, Saskatoon, SK, Canada S7N 5B4

Abstract: We examined Dall's sheep (*Ovis dalli dalli*) feces, collected from July to October, 1997, at four sites (ca. 63-65°N; 128-130°W) in the northern Mackenzie Mountains, Northwest Territories (NWT), Canada, for parasites using Baermann and modified Wisconsin techniques. First-stage larvae (L1) representing a minimum of 2 genera and species of protostrongylids were recovered: (1) spike-tailed L1 were indistinguishable from *Protostrongylus* sp. (prevalence 74%, 0.2-700 larvae per gram (LPG)); and (2) dorsal-spined L1 were morphometrically most similar to *Parelaphostrongylus odocoilei* (prevalence 77%, 0.2-967 LPG). Subsequently, adults of *Protostrongylus stilesi* were recovered from the lungs of 4 hunter-killed sheep in 1997 and 1998, and adults of *P. odocoilei* were recovered from the skeletal musculature of 6 naturally infected Dall's sheep ewes in October 1998 and April 1999. Lesions caused by *P. stilesi* were found most commonly in the dorso-caudal regions of the diaphragmatic lobes. Histologically the adult parasites, eggs, and larvae were associated with a severe, locally extensive granulomatous reaction. In contrast, eggs and larvae of *P. odocoilei* were associated with a mild to moderate multifocal, granulomatous reaction throughout all lung lobes. In the skeletal muscles, adults of *P. odocoilei* were associated with grossly visible hemorrhages and localized myositis. The findings of *P. stilesi* and *P. odocoilei* in Dall's sheep from the Mackenzie Mountains, NWT, represent new host and geographic records, and the first confirmed identifications of protostrongyles in thin-horned sheep. The presence of both these parasites in single hosts is unique and the possible synergistic effects of these combined infections for individual hosts and for host populations warrant further consideration.