

Faecal Survey for Parasites of Stone's sheep in the Muskwa-Kechika Region, British Columbia, Canada

EMILY JENKINS, Environment Canada, Canadian Wildlife Service, Saskatoon, SK S7N 0X4, Canada

HELEN SCHWANTJE,¹ BC Ministry of Environment, PO Box 9338, Stn. Prov. Govt., Victoria, BC V8W 9M4, Canada

Abstract: In spring and late summer from 2000 to 2002, 408 faecal samples were collected from Stone's sheep (*Ovis dalli stonei*) from several herds in the Muskwa-Kechika Management Area, British Columbia (BC). We found eggs of the gastrointestinal parasites *Marshallagia* sp., *Nematodirus* spp., *Trichuris* sp., trichostrongyles (multiple parasites of this family produce identical eggs), *Skrjabinema* sp., *Moniezia* sp., and coccidia *Eimeria* spp.. As well, we found two types of protostrongylid larvae; dorsal-spined larvae identified as the musclem worm *Parelaphostrongylus odocoilei* (using DNA analysis), and straight-tailed larvae identified as lungworms *Protostrongylus* spp.. Stone's sheep populations in B.C. did not have unusual levels of parasitism when compared to other wild sheep populations, although there were differences in parasite fauna and seasonal patterns in parasite shedding. Recommendations for the future include definitive identification of adult parasites, targeted monitoring of herds with higher intensities of parasite shedding (especially the more pathogenic parasites) and/or evidence of a population decline, and expanded population health monitoring. Monitoring might include examination of healthy and dead sheep for verminous and bacterial pneumonia which cause sporadic mortality in Dall's sheep (*Ovis dalli dalli*) and large-scale, all-age die-offs in bighorn sheep (*Ovis canadensis*). Stone's sheep are likely susceptible to pneumonia, as well as parasites and pathogens of domestic animals, based on evidence of transmission between bighorn sheep and domestic livestock elsewhere.

BIENN. SYMP. NORTH. WILD SHEEP AND GOAT COUNC. 15: 130

Key words: British Columbia, faecal survey, gastrointestinal parasites, *Ovis dalli stonei*.

¹ Corresponding author e-mail: Helen.Schwantje@gov.bc.ca