

PHARYNGEAL MICROFLORA OF DOMESTIC AND DALL SHEEP IN ALASKA: MANAGEMENT IMPLICATIONS?

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ABSTRACT: Anticipating the occurrence of disease-related, all-age die-offs of bighorn sheep is now a common component of bighorn management strategies. Domestic sheep have often been implicated in these bighorn die-offs. Exposure of Alaska's Dall sheep to domestic sheep has never been documented, and Dall sheep have never experienced a disease-related die-off. However, it is unreasonable to expect that wildlife managers in Alaska will be able to exclude domestic sheep from Dall sheep ranges forever without firm data that show domestic sheep cause disease-related die-offs in Dall sheep. We began investigating the possible causative relationship between domestic sheep and disease in Dall sheep by conducting a bacteriological survey of tonsils from 16 domestic ewes from a farm near Fairbanks, Alaska. These ewes carried pharyngeal flora typical of those reported for domestic sheep elsewhere, including the Pasteurella haemolytica strains and serotypes which have been implicated in bighorn die-offs. Wild Dall sheep of both sexes from a remote area of the Brooks Range were also assayed for pharyngeal flora using tonsil biopsies. These Dall sheep carried bacteria, including the P. haemolytica strains and serotypes, typical of bighorn sheep. Relevance of these findings to the bighorn-domestic sheep controversy and future research possibilities are discussed.