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Authors: SMITH, T.C., HEIMER, W.E., and FOREYT, W.J.

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CONTAGIOUS ECTHYMA IN AN ADULT DALL SHEEP *(Ovis dalli dalli)* IN ALASKA

T.C. SMITH, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, Washington 99164, USA.

W.E. HEIMER, Alaska Department of Fish and Game, Fairbanks, Alaska 99701, USA.

W.J. FOREYT, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, Washington 99164, USA.

Abstract: One of 73 wild Dall sheep *(Ovis dalli dalli)* captured at Sheep Creek, Alaska, had crusty lesions on mammary glands and teats compatible with contagious ecthyma (CE). A paravaccinia virus, indistinguishable from CE virus was cultured from the crusted scabs removed from the mammary gland. This is the first report of CE in free-ranging Dall sheep.

INTRODUCTION

Contagious ecthyma (CE) has been reported from several free-ranging wild hosts, including Rocky Mountain bighorn sheep *(Ovis c. canadensis)* and mountain goats *(Oreamnos americanus)*.[1,5] In Alaska, CE has been reported in captive Dall sheep and captive musk oxen *(Ovibos moschatus)*.[6] This report describes CE in one of 73 Dall sheep *(Ovis dalli dalli)* captured near Tok, Alaska. This is the first report of CE in free-ranging wild Dall sheep.

CASE HISTORY

A four year old Dall sheep ewe was captured 17 June 1979 at Sheep Creek, near Tok, Alaska as part of a research study being conducted by the Alaska Department of Fish and Game. Numerous sessile, slightly crusted lesions were present on the posterior aspect of both mammary glands and teats. Individual lesions were approximately 1 cm in diameter and some lesions had coalesced to form raised mats 2.5-3.0 cm in diameter. Several, noncrusted lesions were present on the medial aspect of the thigh adjacent to the mammary gland. No other abnormalities were observed.

Full thickness biopsies of teat lesions, samples of whole blood in anticoagulant (EDTA tubes), and serum which had been separated from whole blood were collected. Biopsy specimens in 10% buffered formalin and frozen serum were submitted to the Washington Animal Disease Diagnostic Laboratory, Pullman, Washington for viral culture, histopathology and serum neutralization tests. Virus isolation methods have been described previously.[6] Selected hematologic values including total white cell count and white cell differential were obtained through standard hematologic techniques.

RESULTS

A leucopenia and lymphopenia were detected in peripheral blood. Superficial dermatitis with eosinophilic intracytoplasmic inclusion bodies was seen histologically.

A paravaccinia virus, indistinguishable from CE virus, was isolated in cell culture from crusted scabs removed from the mammary gland. Identification of the virus was based on fluorescent antibody tests with ecthyma immune conjugate and virus morphology. No serum neutralization titer to the CE antigen was detected in the serum from the ewe.

DISCUSSION

Histologic and viral cultural results were consistent with contagious ecthyma or infection with a closely related virus. Serum neutralization titers to the CE virus were found in 17 of 73 serum samples from this population[7] suggesting that CE is more prevalent in Dall sheep than previously suspected.

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