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CONTAGIOUS ECTHYMA IN MOUNTAIN GOAT OF COASTAL BRITISH COLUMBIA[1]

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Abstract: Contagious ecthyma has been reported previously from mountain goat (*Oreamnos americanus*) in one restricted area of eastern British Columbia. A second focus of infection is reported for mountain goat from western British Columbia. Diagnosis was based on appearance of lesions at necropsy, histopathology and demonstration of poxvirus with the electron microscope. The epizootiology of this infection in mountain goat is discussed briefly.

INTRODUCTION

Contagious ecthyma (CE), a little studied disease of wildlife in North America, has been reported from mountain goat (*Oreamnos americanus*) of Mount Wardle in Kootenay National Park, British Columbia,[6] from mountain goat in Alaska[7] and from bighorn sheep (*Ovis c. canadensis*) from Montana and several areas in western Canada.[1,2,6] Based on these reports the disease is apparently more prevalent and widespread in bighorn sheep than in mountain goat, but goats have not been sampled so intensively.

Contagious ecthyma occurs in most, and perhaps in all, sheep-raising areas. It is a specific infectious disease of skin and stratified epithelium which produces natural infection in sheep and goats and accidental infections in man.[5]

All infected herds of wild sheep and goat reported previously have had access to artificial sources of salt (with the exception of the Alaska report), and it has been implied[6] that this may be important in the epidemiology of CE. Samuel *et al.*[6] termed the mineral licks at Mount Wardle as "semi-natural", but failed to mention that Holroyd[4] placed salt blocks there between 1962 and 1964.

This paper documents a focus of infection in mountain goat of western British Columbia isolated from artificial sources of salt.

CASE HISTORY

A mountain goat kid was shot by a hunter on 13 October 1974, near Wahkash Point (50° 57′ N, 125° 32′ W) in Knight Inlet, on the coastal mainland of British Columbia. Gross examination of the kid revealed extensive, irregular dark brown to black lesions along the margins of the lips, and on the muzzle and the nose. The lesions were comparable in severity to those shown by Samuel *et al.*[6] (their Figure 4). Most lesions were dry. Typical CE viral particles were seen by electron microscopy. Lesions were similar histopathologically to previous descriptions from wild sheep and goat.[6]

A second goat kid with similar proliferative lesions was found dead near the killed specimen.

DISCUSSION

The epizootiology of CE may differ in wild goat and sheep. To date, CE has been reported in sheep primarily from

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the east slopes of the Rocky Mountains,[1,2,6] while CE has been reported in goat only from the western slopes (in Canada). Artificial sources of salt have been associated with all cases previously reported. The almost complete isolation of many portions of the coastal mainland of British Columbia, including Knight Inlet, virtually negates the influence of artificial sources of salt or domestic animals in the epizootiology of CE in this area. The salt spray effect of coastal areas generally restricts the need for artificial sources of salt. Domestic cattle once were present at the head of Knight Inlet (some 16 km. from the kill), but none have been known from this area for approximately 20 years (Lansdown, pers. comm.).

The ruggedness of the coast range often is in marked contrast to the less rugged interior ranges. This may produce less interplay between populations of goat on the coast range. In addition, summer group size is reduced as compared to interior populations, winter groups are small and restricted by available habitat and natural salt licks infrequent.[3] These circumstances suggest a possible localization of this infection in certain bands of goat for a prolonged period. Restricted movements by mountain goat on Mount Wardle in eastern British Columbia also may explain the occurrence of CE since 1974.[4]

This is the second report of CE from mountain goat, but the first record of disease in goat from areas where no bighorn sheep are found.

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