

Female Dall's Sheep Summer Nutrition in the Chugach Mountains, Alaska

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ABSTRACT: As part of recent research efforts by the Alaska Department of Fish and Game (ADF&G) to identify issues related to current population declines in Alaskan Dall's sheep (*Ovis dalli dalli*), we conducted a summer nutrition study on a subpopulation of female Dall's sheep (ewes) in the Chugach Mountains of Southcentral Alaska. Over the summers of 2016, 2017, and 2018, we assessed ewe diet compositions and identified forage types through video observation of foraging ewes. During this time, we collected forage and fecal samples to evaluate ewe forage quality [crude protein (%), gross energy (kcal/g), and apparent digestibility (Da)] and identify forage types (deciduous shrubs, evergreen shrubs, forbs, graminoids, lichen, and mushrooms). We found that ewe diet composition varied from one summer to the next as well as from early to late summer. Forage crude protein also varied intra-annually and inter-annually between all years, while gross energy varied within seasons. Nutrition studies like ours will help establish carrying capacities and identify critical habitat of the Dall's sheep within Alaska as current dynamic changes continue to occur in these alpine ecosystems.

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