Carrying capacity:

We define carrying capacity as the number of "animal days" per unit area that a given habitat can support, based on the quantity and quality of its food resources. We do not account for dynamic herbivore-plant interactions (e.g., "overgrazing," "proper-use," "feed-back loops," subsequent effects on plant growth, etc.). We base our calculations on the total supply of plant biomass (current annual growth) that is available to the animal species in question. We are essentially answering the question, "If one were to harvest all the available current annual growth of plants in a given area and bring it into a captive animal facility, how many animal days could the food support while meeting a user-specified level of metabolic requirements?" One animal day is one animal for one day. For example, 22 animal days could be one animal for 22 days, or 22 animals for one day, or any combination thereof. The animal days are always specified by the user's choice of metabolic requirements. We usually work with adult females as the "animal," and we specify their reproductive status (i.e., maintenance, reproductive, etc. – see metabolic requirements [Def. 4]). Adult females are the productive segment of the population in both black-tailed deer and moose, and their nutritional status is a very useful criterion for evaluating range condition or carrying capacity.

We usually work with spatial units of one hectare. **Thus, we work with "animal days per hectare."**

Notice that our definition of carrying capacity is a "snap-shot" definition, applying to one particular point in time – the time when plant biomass and nutritional quality has been measured. Plant biomass, nutritional quality, and animal metabolic requirements change continuously throughout the year.

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