



An adult doe is weighed as part of a long-term deer management study.

Deer study

Population dynamics

A long-term study of the gains and losses in the deer population on the Hopland Field Station was carried out between 1951 and 1975. The objective was to determine the age-specific reproductive rate for deer in the area and to assess the magnitude and causes of deer losses in relation to sex and season.

During the study, nearly 1,250 deer were collected for autopsy under permit from the Department of Fish and Game. More than 1,300 carcasses of deer that died in the field also were examined. Additionally, data were collected on 991 buck deer taken by hunters on the station. Changes

in the sex and age structure of the deer population were measured three times each year by making herd composition counts.

Evaluation of these data indicates that there is an average production of about 20 percent per year in Hopland deer. In other words, about 112 fawns are born per 100 does but, on the average, only half of these survive to one year of age. Losses among older deer average 18 percent per year. Of all losses, 1 percent was from predators; 4 percent were from accidents; 6 percent were killed by hunters; 20 percent were attributed to other natural causes, including starvation, diseases, and parasites; and 6 percent were collected for scientific studies.

Another major wildlife research effort has been a comparative study of the food habits of deer and sheep on the range. Rumen samples were analyzed from 363 deer and 80 sheep between 1951 and 1973 by the Department of Fish and Game Food Habits Laboratory. From these analyses, it was possible to determine the month-by-month consumption of various kinds of range forage and, by comparing this utilization with the production of forage on the station, to determine the relative impacts of the two species on their food supplies.

In general, the food habits of these two ruminants were complementary rather than competitive. The deer diet consisted of approximately 70 percent browse, 14 percent forbs, and 16 percent grass, whereas sheep consumed only 6 percent browse, 9 percent forbs, and 85 percent grass. With dual stocking of a range by ruminants with complementary diets such as these, much more efficient use is made of the total spectrum of vegetation produced than with either a grazing or a browsing species alone.

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