

# Sage-Grouse Need Snow



Sage-grouse feeding on low sage, photo by Gary Back

Winter can be a good time of year for sage-grouse. These highly adapted birds can gain weight over winter so that spring finds them in better shape than in the fall. This is good since spring is a time of stress, when males usually lose weight from lek dancing and females produce and incubate eggs.

To have a good winter, these birds need both sagebrush and snow. Sagebrush leaves persist throughout winter, providing a nutritious food source at a time when other foods are scarce.

Snow is so important that sage-grouse choose their winter habitat based on its depth. Sagebrush needs to extend 10-12" above the snow for bird feeding and roosting. The birds prefer to eat low sagebrush and will night roost among it, but they prefer big sagebrush for day roosting. During winters of decent snow depth, when snow buries the low variety, the birds switch to eating big sagebrush.

Sufficient snow depth is also important since it helps keep sage-grouse warm. They tunnel into snow and spend the night to escape the

bitter cold. They accomplish this feat two ways. While flying over deep, soft snow, they simply land and tunnel downward until buried.

If snow is not deep enough for this technique, they use snowdrifts. Wind and blowing snow often creates long, narrow snowdrifts extending downwind of sagebrush. Snow drifts may form even when bare ground is visible. In this case, sage-grouse simply walk into the sides of the snow drifts, tunneling into their centers. As the snow behind them collapses, it seals the birds inside the snow, insulated them from wind and cold. The next morning, the birds simply continue tunneling forward to emerge from the other side of the drift.

During a bitterly cold night at -30 degrees Fahrenheit, birds buried beneath eight inches of snow may experience temperatures as much as 27 degrees above zero. Snow cover can provide a cocoon 40-50 degrees warmer than the night air.

Birds spend more than half of winter nights buried in snow burrows, especially nights when temperatures are 15 degrees or colder. Snow burrows allow sage-grouse to expend much less energy to stay warm. They are so important that birds fly as much as six miles each evening to reach good tunneling sites.

Winters with little or no snow stress the birds and leave them in poorer condition for spring breeding.

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