



North American Pollinator Protection Campaign

WILDLIFE FACT SHEET SAGE-GROUSE



The North American Pollinator Protection Campaign (NAPPC) is a tri-national collaboration of diverse partners working to protect pollinators and raise the profile of pollinator issues.

The mission of the NAPPC is to encourage and support actions to benefit the health of pollinating species in North America.

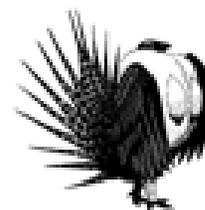
**North American Pollinator
Protection Campaign
423 Washington St.
San Francisco, CA 94111
415-362-1137
415-362-3070 fax
info@coevolution.org**

For more information about how to help pollinators or to make a tax-deductible contribution for pollinator protection, please contact us at: www.NAPPC.org or www.coevolution.org.

*NAPPC is coordinated by the
Coevolution Institute.*

Many species of North American upland game birds depend on the food resources provided by both pollinated plants and the adults and larvae of pollinating insects. Game birds may also nest or seek shelter under plants that reproduce using the services offered by animal pollinators.

The Greater and Gunnison sage-grouse (*Centrocercus urophasianus* and *C. minimus*) are the largest species of grouse in North America. True to their name, sage-grouse are sagebrush obligates, meaning they depend on sagebrush as their primary source of food and cover throughout the year. Although sagebrush is wind-pollinated, sage-grouse hens must consume more nutrient-rich, animal-pollinated plants in preparation for breeding. Some of the most important plants include:



Desert parsley
Hawksbeard
Phlox
Everlasting
Clover
Buckwheat
Pursh's milk-vetch
Obscure milk-vetch
Mountain dandelion

Lomatium spp.
Crepis spp.
Phlox spp.
Antennaria spp.
Trifolium spp.
Eriogonum spp.
Astragalus purshii
Astragalus obscurus
Agoseris spp.

For the first few weeks of life, juvenile sage-grouse require a diet principally composed of insects and forbs to ensure sufficient growth for survival to adulthood. The more commonly consumed insects for early chick growth include beetles (*Scarabeidae* and *Tenebrionidae*), thatch ants (*Formicidae*), and grasshoppers (*Orthoptera*). Beetles and ants are also known to pollinate flowers as they search for nectar and pollen food resources in sage-grouse habitat. Researchers have reported chick diets containing over 40 families of invertebrates and over 30 species of forbs, which include a lot of pollinating insects and pollinator-dependent plants!

Forbs consumed by juvenile sage-grouse are able to reproduce thanks to frequent flower visits by insect pollinators. Some of the more common pollinated forbs in the diets of sage-grouse chicks include the same species consumed by hens preparing for breeding, as well as the following pollinator-friendly flowers:

Curlycup gumweed
Sego lily
Aster
Monkey flower
Blepharipappus
Broomrape
Fleabane

Grindelia squarrosa
Calochortus macrocarpus
Aster occidentalis
Mimulus nanus
Blepharipappus scaber
Orbanche spp.
Erigeron spp.





How You Can Help Sage-grouse and Pollinators:

- Promote pollinator conservation at the local level by cultivating pollinator-friendly plants in your home and business landscape, especially those that provide sage-grouse food or cover.
- Protect pollinator and sage-grouse habitats by working with legislators, environmental organizations, and community groups to help reduce unplanned development in wild habitats.
- Reduce or eliminate pesticide use whenever possible – try integrated pest management!
- Learn more about pollinators and sage-grouse to better assist in their survival.
- Seek more information, and support local, national, and international efforts to promote pollinators and native plant communities.
- Provide additional resources for butterflies and bees. Put out slices of overripe fruit, or a sponge in a dish of lightly salted water. Use a dripping hose to create a butterfly and bee drinking area. Mix a small bit of sea salt or wood ash into the mud.

Sage-grouse, like other upland game birds, have shown significant long-term declines in recent years. Once a resident of 16 states and 3 provinces, the sage-grouse has suffered an average loss of habitat of up to 46% since pre-settlement times. This negative trend is attributed primarily to some of the same issues that have caused declines in populations of pollinating species, which for sage-grouse include: habitat degradation brought on by development of wild lands for roads, livestock, housing and energy exploration, invasion of exotic species, and fire.



© Gary Kramer, USWFS

Pesticide use has reduced numbers of high-energy insect foods for young and wintering adults, as well as the abundance and diversity of insect pollinators for plants used by sage-grouse throughout their lifetimes. Because sage-grouse depend on pollinated plants and pollinating insects for survival, ensuring the future of sage-grouse populations will require management activities that protect the pollinators that help to maintain sage-grouse habitats and provide food for their survival.

References:

Connelly, J.W., S.T. Knick, M.A. Schroeder and S.J. Stiver. 2004. Conservation assessment of greater sage-grouse and sagebrush habitats. Western Association of Fish and Wildlife Agencies. Unpublished report. Cheyenne, WY.
Sage-grouse. California Department of Fish and Game. www.dfg.ca.gov/resources/sagegrse.html.
Sage-grouse images: © 2001 Zackery Zdina, Life Drawing & Education, www.lifedraw.com/sage/sageport.html.
Schroeder et al. Distribution of Sage-grouse in North America. *The Condor* 106:363-376.

**For more information about how to help pollinators or to make a tax-deductible contribution for pollinator protection, please contact us at:
www.NAPPC.org or www.coevolution.org.**