## Pinedrops are an unusual forest plant

**By Craig F. Eisenbeis** Correspondent

Perhaps you've seen them. Popping up along forest trails, or even in your own backyard, pinedrops are one of the more unusual plant species awaiting your discovery. Hikers frequently ask, "What are those things?" And that's a good question. The woodland pine drop is a parasitic plant that lives in a sort of biological "three-way," with a particular type of fungus and — not surprisingly, given its name — pine trees.

Woodland pinedrops appear in the spring and on into the summer, erupting from the forest floor, looking initially like big and tall skinny mushrooms.

Commonly, these purplish plants range in height from one to three feet but have been reported to grow as high as six feet. Pinedrops do not possess enough chlorophyll to achieve their own photosynthesis, and that is where the parasitic aspect of these plants comes into play.

This curious parasite draws its sustenance from pine roots with the apparent assistance of a fungus of the genus *Rhizopogon*. Originally thought to be a saprophyte, pinedrops do not directly draw nourishment from either decaying forest material or from living pine-tree roots. Rather, pinedrops parasitize the fungus, which — in turn — taps into the pine-tree roots, thus creating the

three-way relationship. The symbiotic nature of this process has not been extensively studied and is not completely understood.

The maturing pine drop plant develops a distinctive and attractive white clusterflower in a tassel that is quite recognizable, particularly when it appears atop the purplish, leafless stem. Initially somewhat fragile and tender, deer apparently consider the developing flower to be a delicacy since they often nip the flowers off, leaving a peculiar naked stalk. As the plant matures the stalk becomes very hard and woody and often persists through the winter, long after the plant has flowered and gone to seed. The seeds are very difficult to propagate and the plants are nearly impossible to transplant since they require the unique collaboration of all three species in a favorable forest environment.

Pinedrops are found throughout the western mountain forests and in a few eastern locations, as well. The plant most closely related to the pine drop is the *Sarcodes*, which has the common name of snow plant or snow flower, which is so named because it frequently is seen emerging from spring snows in the



Pinedrops are unusual parasitic, flowering plants found in local forests.

Sierra Nevada Mountains. Its range extends into the southern Cascades of Oregon, but is not known to exist as far north as the Sisters area.

The snow plant is shorter and stockier in appearance and has a red- or magenta-colored flower. Its range definitely overlaps with that of the pinedrops, since pinedrops are found in forest environments from Canada to Mexico. Your correspondent has seen the two species in close proximity in the Sierras.



The snow flower is similar to pinedrops but is usually found farther south, in southern Oregon — or as with this specimen, in the Sierras.









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