Conifer Cones

by Marilyn Loser

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My ponderosa pine (*Pinus ponderosa*) has its first mature pinecone! Most of the leaves have fallen from the deciduous trees around Alamosa so my eyes settle on conifers. My single ponderosa pinecone doesn't seem like a special deal compared to the mother-lode ponderosa at the corner of Main St. and Poncha (in front of Safeway). Once a part of school grounds, the grand tree has been producing loads of cones for at least the last 30 years. Most of the falling cones land in the parking lot or in the street and are soon crushed by car tires. I tend to collect some uncrushed ones each year for evergreen-wreath decorations.

The simple definition of conifer from the online Merriam-Webster dictionary is "a bush or tree (such as a pine) that produces cones and that usually has leaves that are green all year." Conifer is a Latin word, a compound of conus (cone) and ferre (to bear), meaning "the one that bears cones" according to Wikipedia.

There are more than 550 species of conifers, and most are evergreen trees and shrubs. They grow throughout the world (except in Antarctica) and prefer temperate climate zones. The protective cone that the seeds grow in is officially called a strobilus; however, most people just call it a pine cone!

The most abundant native conifers in Alamosa are Colorado blue spruce (*Picea pungens*), ponderosa pine, Austrian pine (*Pinus nigra*), and pinon pine (*Pinus edulis*). There are also a few bristlecone pines (*Pinus aristata*). I have a couple of mugo pines (*Pinus mugo*) which are native to Europe.

If you start looking for cones, you'll notice that spruce cones typically appear near the top of the tree. On the other hand, cones on my Austrian and mugo pines appear all over. Also, spruce cones tend to be thinner and more flexible than Austrian and ponderosa cones. Most spruce and pine cones hang down or to the side while fir cones are upright (there is only one specimen listed in the Alamosa Street and Park Tree inventory).

Pine cones take two years to mature. At maturity, the cones open up and the seeds fall out. By the time the cones fall from the trees the seeds are usually gone. What we tend to call cones are female. They need to be fertilized by male pollen cones which are very small and inconspicuous. Young female cones tend to face up allowing wind-born pollen to settle in. The cone scales close up and seal, protecting the developing seeds from outside influences.

There are a lot of pinon pines along Highway 285 in northern New Mexico between Tres Piedras and Ojo Caliente. In the fall, you'll see people place blankets under the trees and shake the branches to release the cones. The seeds, called pine nuts, are delicious as most of us know. The pinon pine seeds are smaller than most commercial pine nuts available in stores – they mostly come from Asia.

Not all conifer cones dry out in the fall and open up. For example, Colorado native lodgepole pines require high heat, such as that produced during a forest fire, to open their cones. The cones are tightly sealed with a layer of resin and woody tissue that sticks the cones' scales together.

Serotinous is a scientific term for a seed that requires an environmental trigger in order to be released. For the lodgepole, the trigger is heat. The cones can remain sealed for 60 to 80 years according to several web sites. In areas of Colorado where these pines grow, dense stands pop up after a fire.

My Austrian pines now produce enough cones each year for holiday decorating, but I still prefer the somewhat larger cones of my old, favorite ponderosa pine.

"*The best part of happiness is the pines*." Terri Guillemets in "Thunder in the mountains"