



Cones for Connoisseurs



Take time to appreciate the spring beauty of these conifers—and perhaps add one to your garden.

BY SARA MALONE

PHOTOGRAPHS
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ALTHOUGH THE very name conifer comes from the Latin word *conus*, which means “cone bearing,” we don’t tend to think of cones as the defining feature of conifers or that cones are terribly interesting, diverse, or eye-catching beyond the traditional wreath trimmings and table decorations during the winter holidays. That is a shame, because the new spring cones of many conifers are highly ornamental, even sometimes rivaling the iconic seasonal displays of daffodils and snowdrops.

All conifers bear cones, but that is about the only characteristic shared by the trees in the order Pinales, which includes all conifers. Despite the widespread belief that all conifers are evergreen, there are many so-called deciduous conifers, such as larches (*Larix* spp.) and bald cypresses (*Taxodium* spp.), that lose their needles in winter. Nor are all conifers “Christmas-tree shaped” and they are not all green. Some of them don’t even have needles. But study any mature conifer and you’ll find cones of some sort.

The largest conifer family is the pine family (Pinaceae), which includes spruces (*Picea* spp.), firs (*Abies* spp.), pines (*Pinus* spp.), cedars (*Cedrus* spp.), hemlocks (*Tsuga* spp.), and larches. People tend to refer to all conifer cones as “pine cones,” which actually

makes sense given that so many conifers are pines of one sort or another. In Mexico, which has more pines than any other country, all conifers are commonly called *pinos*.

THE IMPORTANCE OF CONES

The cones with which we are most familiar are female—or seed—cones from various species of pine or spruce. These are the classic cones for holiday decorations: dried, brown, oval, or egg-shaped bodies ringed with scales. While they are fun to glue onto wreaths or put in flower arrangements, they are not particularly showy. These seed cones are an important food source for wildlife, as the seed is high in both fat and protein, and, in some species, are present in areas with snowy winters when other food is scarce. Pine species in Mexico, the United States, Asia, and Europe produce seeds that we call pignoli or piñon, which are an essential ingredient in pesto, as well as a frequent ingredient in Mediterranean cooking.

THE BIOLOGY OF CONES

Delving a little deeper, some conifers are monoecious—meaning that both male and female reproductive organs occur on the same individual, and some are dioecious—

Above: *Picea abies* ‘Acrocona’ is a dwarf selection of Norway spruce with pendulous terminal seed cones that are an eye-catching shade of raspberry-pink when they emerge in spring. The cones turn brown by summer.

Opposite page: These purple-and-green female cones of ‘Horstmanns Silberlocke’ Korean fir (*Abies koreana*) feature a texture and pattern that recall Fabergé eggs. By autumn, they will have dried out and matured to a rich, rusty brown, resembling intricately woven baskets.



which means that they have separate male and female individuals, but none have what are referred to as “perfect” reproductive organs. Perfect reproductive organs are those that have both male and female parts in the same organ, or flower. Conifers always have separate male and female cones, whether they occur on the same plant or on separate individuals.

The woody seed cones are resilient enough to remain intact after pollination and germination. The male, or pollen, cones, in contrast, are generally small and herbaceous. They are also much more prevalent on the trees. All conifers are wind-pollinated; like other ancient plants such as ginkgos and olives, they evolved before the arrival of pollinating insects. Conifers have developed a strategy to avoid, or at least minimize, self-fertilization: the seed cones are generally held high up in the tree and the pollen cones lower down, so that the wind tends

Two years’ growth of female cones are represented on this Japanese black pine (*Pinus thunbergii*). The new rounded, reddish female cones rise above the larger, elongated cones below that formed the previous spring. Dozens of gardenworthy cultivars are available.

to sweep the pollen from one tree to the next. Conifer pollen, particularly that of pines, is largely responsible for the allergies that many people experience in spring.

The seed cones of cedars and firs disintegrate on the tree, which is why you will never see dried cedar or fir cones used as decorations! Other cones are smaller or rarer and some—like those soft, red, fruitlike arils of yews (*Taxus* spp.)—don’t look like cones at all.

So what conifers should we plant if we want to add oomph to our spring garden? The decorative cones that most of us are likely to encounter are those of firs, spruces, and pines.

By the way, if you are one of the many people who have difficulty telling firs and spruces apart, here’s a simple alliterative memory tool to help you out: Firs, or *Abies*, have cones that are held *above* the branches, whereas spruces, or *Picea*, have cones that are *pendulous*. Pine cones, on the other hand, can be held in a variety of different attitudes, sometimes in clusters, sometimes solo, sometimes at the very tips of the branches, and sometimes closer to the center of the tree.

CHOOSE CULTIVARS FOR BEST DISPLAY

While some wild trees have lovely cones, the greatest impact comes from the cones of cultivars. There are only about 600 species of conifers, but there are over 8,000 conifer cultivars, many of which have been selected because of their jaw-dropping cone displays. An additional benefit of most conifer cultivars is that they are slower growing and stay smaller than the species; hence ma-

THE AMERICAN CONIFER SOCIETY

The American Conifer Society (ACS) is a 501(c)3 organization whose purpose is to promote the use of conifers in the landscape and to educate the public about their care and conservation. The ACS grants scholarships to students in the fields of horticulture, forestry, and related subjects at both the undergraduate and graduate level. It also provides grants to public gardens and professionals undertaking research on conifers, and for conifer conservation. Over 40 public gardens across the United States have been designated “conifer reference gardens” by the Society, in a program whereby the garden and the ACS work together to increase the public’s awareness of the many ornamental uses of this marvelous group of woody plants and to encourage both *in situ* and *ex situ* conservation. The ACS also maintains the most complete and accurate conifer databases on the Internet, currently with over 2,500 records. Members are encouraged to assist in updating this database by providing cultural experiences and photographs. To join the ACS in its education and conservation efforts, visit www.conifersociety.org.



Dwarf ‘Blue Angel’ cedar of Lebanon (*Cedrus libani*) produces upright, barrel-shaped, resinous female cones that mature from purplish to brown over a period of two years. Unlike many conifers, male cedar cones release pollen in autumn rather than spring.

ny of them are considered “dwarf.” These plants are garden-friendly and well suited to smaller spaces. In addition, many are amenable to aesthetic pruning, which keeps their size in check and can emphasize and enhance their structure.

To inspire you to add a conifer or two to your garden for spring interest, take a look at the species and cultivars we’ve highlighted on these pages.

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‘Angel Falls’ is a slow-growing cultivar of eastern white pine (*Pinus strobus*) with cascading branches. Here you can see this year’s new, small cones among last year’s mature cones. Covered with a sap that protects the protein-rich seeds within from birds and mammals, the older cones appear as if they have been dipped in sugar.



Opposite page: Arnold fir (*Abies* × *arnoldiana* 'Poulsen') is a cross between *Abies koreana* and *Abies veitchii*. It generally doesn't put on a huge display of cones every year, but when it does, it's a showstopper. This is a dwarf tree that grows to about a foot high with a spreading habit.

Right: Although it can be a towering tree at maturity, purple-cone spruce (*Picea purpurea*) grows very slowly—to only five to 10 feet tall after 10 years—so it can fit comfortably in most average-size gardens. The hanging one- to one-and-a-half-inch-long female cones start off red to dark purple.

Below: Well suited for small gardens and containers, 'Pusch' Norway spruce (*Picea abies*) grows only one to two inches a year, topping out at 18 inches tall after 10 years. This cultivar is notable for a stunning display of pink cones resembling rosebuds on most of the terminal branches in early spring. The previous year's weathered brownish cones provide an attractive contrast.

