

Conifers

Are effectively the most representative of the gymnosperms, a group of plants with seeds but not flowers. Through the fossil record it is known that conifers have existed for more than 390 million years. Their leaves are usually needle-shaped and perennial. They are woody plants that reproduce by means of seeds that contain tissues and an embryo that grows until it becomes an adult plant.

YOUNG LEAVES
are covered by a protective capsule.

FEMALE CONE

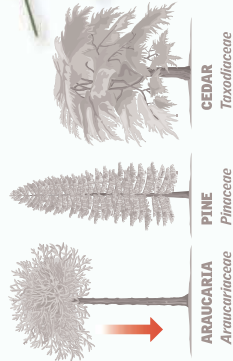
Small and light, it is likely to be pollinated as soon as it appears.

LEAVES

Grouped in sets of two, they have elongated shapes. They carry out photosynthesis.

Classification

The name "conifer" is sometimes erroneously believed to derive from pine trees' conical shape. In reality, there are other forms of coniferous plants.



Good Wood

The great majority of conifers are evergreens, although some, such as larches (tamarac), are deciduous. Conifers are the tallest and most long-lived trees, and they provide most of the wood used in industry. Most conifers form new shoots during the summer. They produce a resinous substance that protects them from freezing during winter. This adaptation permits vital nutrients to continue to circulate through their vascular systems, even in very cold weather.

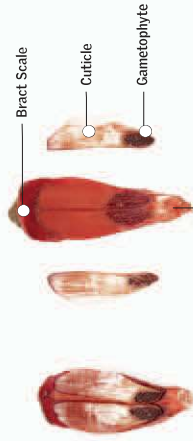


14° F (-10° C)
OR LESS: TYPICAL AVERAGE

January temperature across the extensive coniferous forests of the Northern Hemisphere.

LEAFLET

SCALE

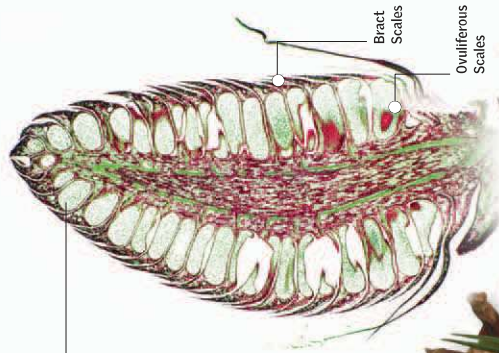


DISPERSION

The oviferous scales generate a greenish gelatin containing the female gametes. The female gametes are freed when the sac that contains them opens. A forest fire can promote reproduction by causing the sac to open.

Pine Cones

The female cone contains ovules that are situated among its oviferous scales. The cones are woody and are usually found in the upper branches of the tree. The male cones are not woody and are usually found in the lower branches. When the ovules of a female cone are pollinated, the resulting seeds need about three years to mature inside the cone. Mature ovules are popularly called pine nuts.



CLOSED

OPEN



Pine Nuts

Pine nuts have long been used with honey and sugar to make pastries. When summer arrives, harvested pine cones are placed in the sun, which causes them to open. The pine nuts are then shaken loose from their cones and gathered. In traditional processing the pine nuts are soaked in water to remove their outer covering, which floats to the surface. The pine nuts are then run between two closely spaced mechanical rollers to crack their inner shells. Finally, the pine-nut meat is separated from the shell by hand.

MATURE CONE

Three years after the cone appears, its seeds are ready to disseminate.