

GRAY PINE

Pinus sabiniana Dougl. ex
Dougl.

Plant Symbol = PISA2

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J. S. Peterson
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Alternative Names

foothill pine, bull pine, digger pine, California foothill pine

Uses

Ethnobotanic: The seeds of gray pine were eaten by many California Indian tribes and are still served in Native American homes today. They can be eaten fresh and whole in the raw state, roasted, or pounded into flour and mixed with other types of seeds. The seeds were eaten by the Pomo, Sierra Miwok, Western Mono, Wappo, Salinan, Southern Maidu, Lassik, Costanoan, and Kato, among others. Sierra Miwok men climbed the trees and twisted the green cones off by hand before the seeds were fully developed. These immature cones were roasted for 20 minutes in hot ashes, yielding a brown, sweet

syrup. The pitch of the gray pine was used as a medicine by the Western Mono and the branches were made into household utensils for stirring acorn mush. The Costanoan used the pitch as a treatment for rheumatism. The needles were used for thatch, bedding, and floor covering and the bark for house covering by the Sierra Miwok. The branches and roots were used in California Indian basketry and still gathered to a limited extent by contemporary weavers.

Wildlife: Numerous birds feed on the seeds of gray pine including the red-shafted flicker, California jay, and band-tailed pigeon. The foliage, bark, and seeds provide food for black bears, Douglas chickarees, and gray squirrels. Mule and white-tailed deer browse the foliage and twigs.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status, and wetland indicator values.

Description

General: Pine Family (Pinaceae). This native tree reaches 38 m in height with a trunk less than 2 m wide. The gray-green foliage is sparse and it has three needles per bundle. Each needle reaches 9-38 cm in length. The trunk often grows in a crooked fashion and is deeply grooved when mature. The seed cone of gray pine is pendent, 10-28 cm, and opens slowly during the second season, dispersing winged seeds.

Distribution

It ranges in parts of the California Floristic Province, the western Great Basin and western deserts. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Establishment

Adaptation: This tree is found in the foothill woodland, northern oak woodland, chaparral, mixed conifer forests and hardwood forests from 150-1500m.

Extract seeds from the cones and gently rub the wings off, and soak them in water for 48 hours, drain them, and thoroughly surface-dry. Put seeds in a plastic bag, without any medium, seal the bag and place them in refrigerated conditions until their

chilling treatment begins. Allow three times the air space as seed space in the bag. It is best to sow the seeds in May and therefore, expose the seeds to a chilling treatment of at least sixteen weeks prior to sowing. After cold stratification, plant the seeds in a well-drained coarse potting mix in leach tubes that are narrow but deep with two seeds per tube. These containers should allow roots to reach the air and stop growing and be at least 6 inches deep. Fertilize the containers with a starter formulation of fertilizer with low or zero nitrogen. These containers can be kept in a greenhouse for the first 4 to 6 weeks, receiving 70-degree temperatures during the day. Keep the surface of the soil moist during the germination phase. Next after the first set of cotyledons, water the plants with a deep, thorough soaking and let the plants dry in between watering. Thin the plants down to one per container and move the pots into a shade-house with 30 percent shade after 4 to 6 weeks. Protect the plants from wind and wildlife. During the main summer growing season use a balanced fertilizer applied to each container. At the end of the growing season use a finisher formulation of fertilizer. Plant the plants in the ground outside in the late winter or early spring in moist soil. Conduct supplemental hand watering or irrigation if the rains are insufficient. Clear weeds in a 3 feet by 3 feet area around the plants to encourage better survival and growth rate. Make sure a protective barrier is placed around the conifers such as vexar tubing to shield them from jack rabbits, deer and other wildlife that may feed on the leaves, stems, and roots.

Management

The Pomo pruned the trees periodically.

Cultivars, Improved and Selected Materials (and area of origin)

This species is available from most nurseries within its range that handle native plants. Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office for more information. Look in the phone book under "United States Government." The Natural Resources Conservation Service will be listed under the subheading "Department of Agriculture."

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