

Nepal alder

Alnus nepalensis D. Don

Birch family (Betulaceae)

Post-Cook introduction

Medium-sized deciduous tree introduced in forest plantations in moist mountain areas, with elliptical wavy toothed leaves, becoming 30–90 ft (9–27 m) in height. Trunk straight, 1–2 ft (0.3–0.6 m) in diameter, becoming slightly enlarged at base. Crown spreading, irregular. Bark gray, smooth with horizontal corky ridges, becoming fissured. Inner bark pinkish or brown streaked, bitter or astringent. Twigs greenish, becoming brown, hairless, with raised half-round leaf scars, and pith triangular in cross section.

Leaves alternate, with paired narrow greenish stipules shedding early. Leafstalk short, less than $\frac{3}{8}$ inch (1 cm) long, light green. Blades elliptical, $2\frac{1}{2}$ –5 inches (6–13 cm) long and $1\frac{1}{2}$ –3 inches (4–7.5 cm) wide, shortpointed at both ends, finely wavy toothed on edges, thin, becoming hairless, above dull green with many slightly curved side veins, beneath paler with dotlike yellow brown scales and slightly raised veins.

Flowers male and female on different twigs, minute, crowded with scales. Male flowers in several stalked, long, narrow drooping clusters (catkins). Female flowers in conelike clusters on branching side twigs, from narrowly cylindrical dark gray green buds $\frac{5}{16}$ inch (8 mm) long. Fruits many, conelike, $\frac{1}{2}$ – $\frac{5}{8}$ inch (13–25 mm) long, becoming dark brown, with many spreading scales, remaining attached. Seeds (nutlets) minute, rounded and flat, light brown, more than $\frac{1}{16}$ inch (2 mm) long, with 2 broad wings.

The wood of five trees from the Kohala Forest Reserve was tested for some strength properties, machining, and veneer manufacture at the Forest Products Laboratory (Gerhards 1964, Lutz and Roessler 1964, Peters and Lutz 1966). It is pale brown or blond and marked with occasional broad rays, as is red alder (*Alnus rubra* Bong.). It is of low density (sp. gr. 0.34), similar in most properties to red alder but softer. It is easily seasoned and machines well, but is not resistant to decay or termite attack. The wood is suitable for plywood corestock, drawer sides and backs, and other interior uses in furniture manufacture but is not presently used in Hawaii. In India, it is reported that the bark serves for tanning and dyeing. It is a nitrogen fixer, as are other alders.

Within forest plantations in moist mountain areas of Hawaii, such as at 3000 ft (914 m) altitude in Kohala Forest Reserve on Hawaii, where there are about 500,000 board feet of timber. Also at 3500 ft (1067 m) in Molokai Forest Reserve, Molokai. It is suited to very wet forests but is subject to windthrow and breakage in windy areas.

Champion

Height 75 ft (22.9 m), c.b.h. 11.3 ft (3.4 m), spread 38 ft (11.6 m). Pepeekeo Arboretum, Hilo, Hawaii (1968).

Range

Himalaya Mountains of Nepal and India. Reported to be common in temperate forests.



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Twig with buds of female flowers and cones, 1 X.