

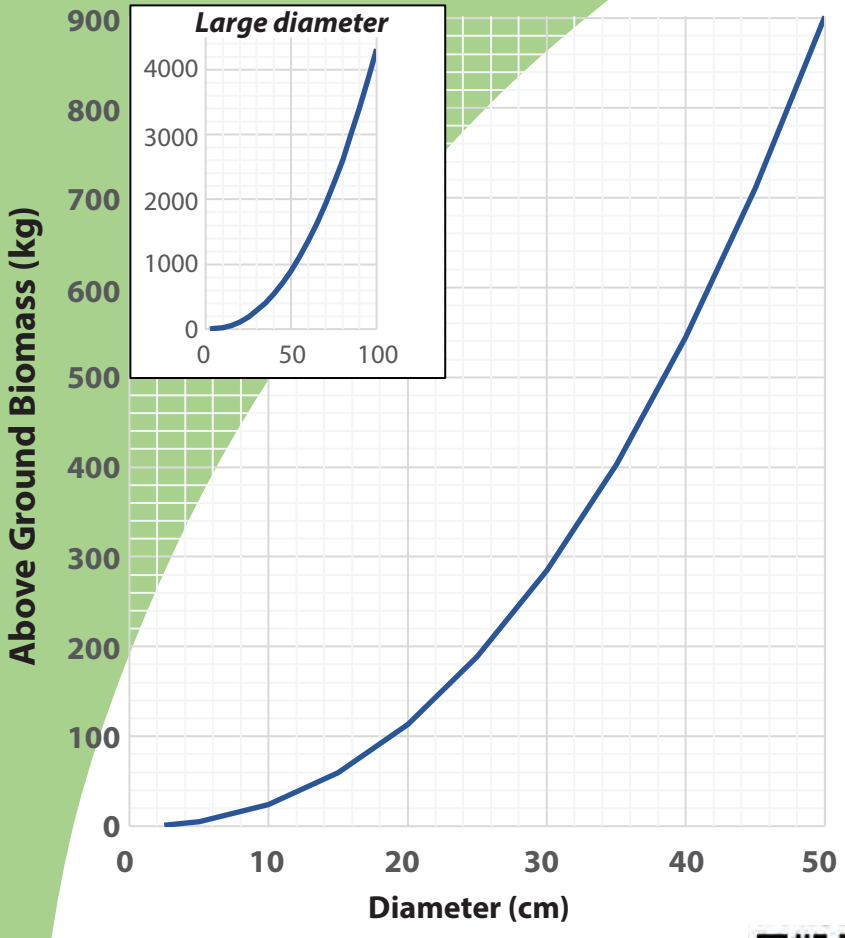




Redwood, *Sequoia sempervirens*

Bark: reddish-brown, thick, rough, and deeply furrowed, up to two feet thick. **Needles:** shaped like a double-edged sword, and occur in a flat plane. They are typically about 1/2-1" long and are green on top (although sometimes with white lines) with distinct white bands below. **Cones:** about an inch long and produce tiny seeds. **Other features:** Coast Redwoods have a base the same thickness as the trunk, rather than the conical shape of the Giant Redwood.

Calculate the biomass of Sequoia



Jenkins et al., 2003, Forest Science

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Measure the diameter of a tree, appx. 4ft above the ground.
Record the value in cm.
Use the chart to find biomass!

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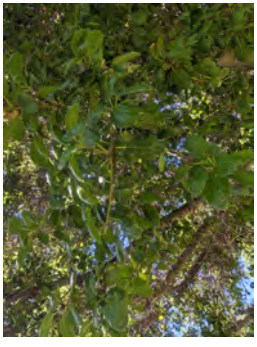
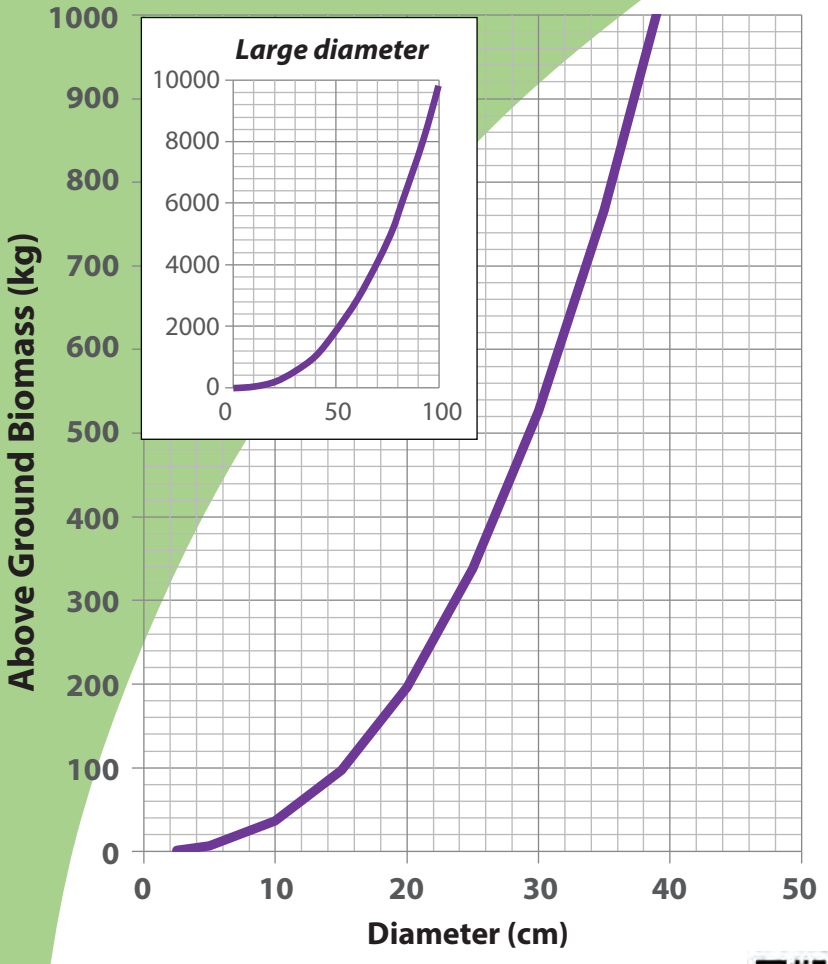




Oak Tree, *Quercus*

Bark: Young oaks have smooth, silver-brown bark. Older oaks grow rugged and appear covered in finger-shaped platelets w/ deep fissures between. **Leaves:** longer than they are wide, they have five-six deep rounded lobes and short stalks. Leaves first emerge in mid-May and turn yellow-brown in autumn. **Seeds:** oak's seeds are acorns: shiny, ovoid fruits held tightly in textured cups. They start green and slowly turn brown. **Other features:** Look gnarled, branches kinked and snaking outwards

Calculate the biomass of Oak Trees



Jenkins et al., 2003, Forest Science

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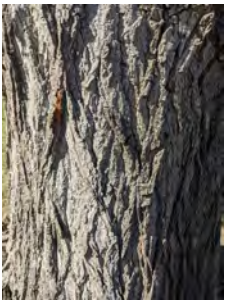
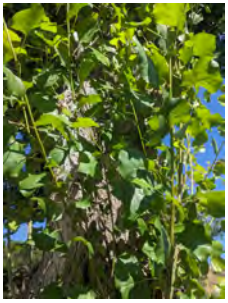




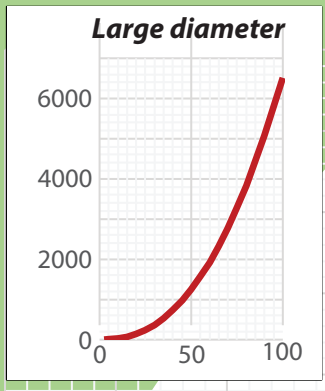




Black Poplar, *Populus Nigra*

Bark: dark brown but often appears black, and is thick with numerous fissures. **Leaves:** diamond-shaped and shiny, serrated edges; turn yellow in the fall. **Flowers:** catkins, elongated cluster of flowers bearing scaly bracts and usually lacking petals. Male catkins are red and female catkins are yellow-green. Pollinated by the wind. **Other features:** knobbly 'bosses' on its trunk and spreading branches often touching the ground then sweeping upwards again.

Calculate the biomass of Black Poplar



Jenkins et al., 2003, Forest Science

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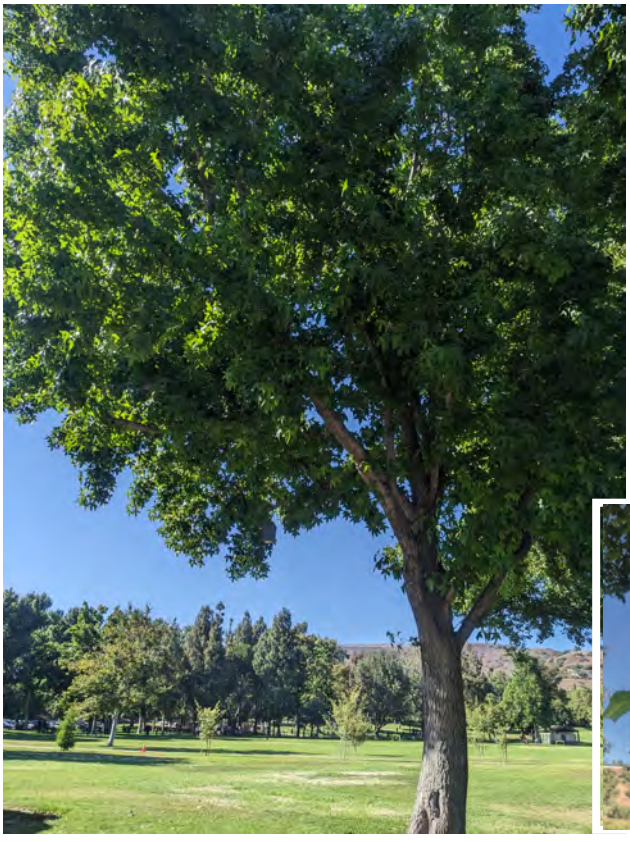


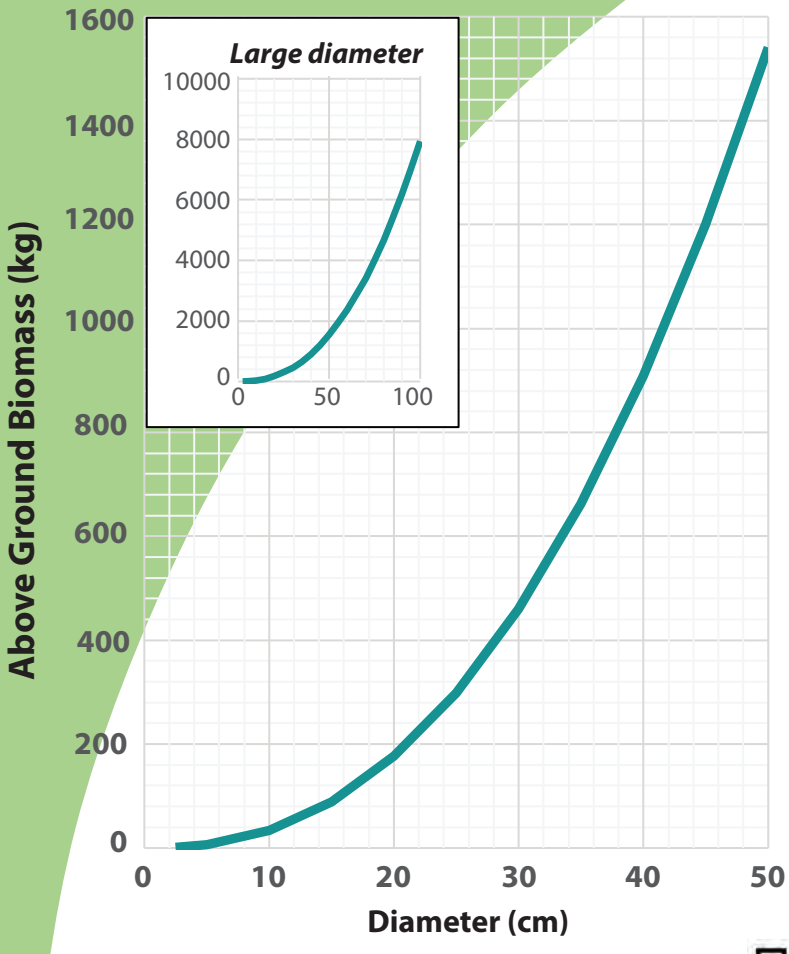




Sweetgum, *Liquidambar styraciflua*

Bark: light gray to brown, rough in texture with slight ridges running throughout the entire trunk. **Leaves:** star-shaped, with 5 (sometimes 7) lobes, 3–6 inches wide, deeply lobed; margin toothed, tips long-pointed; slightly aromatic when bruised. **Flowers:** 1–1+1⁄2 inch diameter, covered with rusty hairs. **Seeds:** aggregate of small 2-celled capsules that from a spiked ball. **Other features:** young shape is a pyramid older trees more oval shaped. Can grow up to about 70 feet tall and up to 40 inches wide.

Calculate the biomass of Sweetgum



Jenkins et al., 2003, Forest Science

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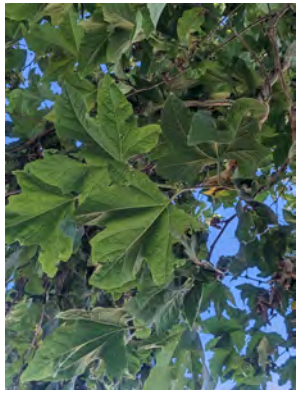
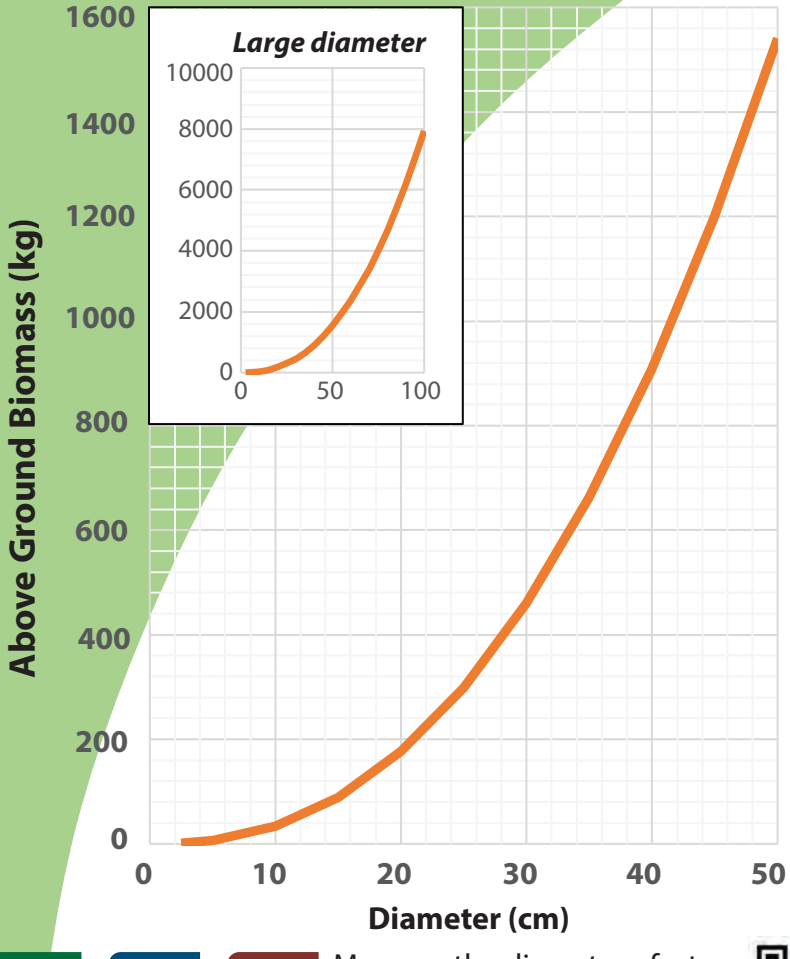




Sycamore, *Platanus occidentalis*

Bark: thin, mottled brown green and white. Sometimes calleed 'camouflage' bark. Exfoliating, meaning it sheds regularly. **Leaves:** palmately veined, meaning they radiate out from a single point. Large, with 3-5 lobes. Edges like saw teeth. Underside is pubescent or fuzzy. **Seeds:** Seed balls less than 1-inch in diameter. **Other features:** Deciduous, meaning leaves fall in winter. Very large and valued for providing shade.

Calculate the biomass of Sycamores



Jenkins et al., 2003, Forest Science

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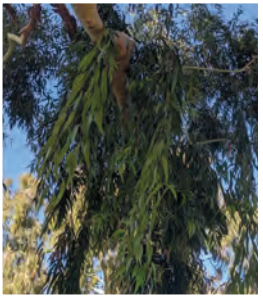
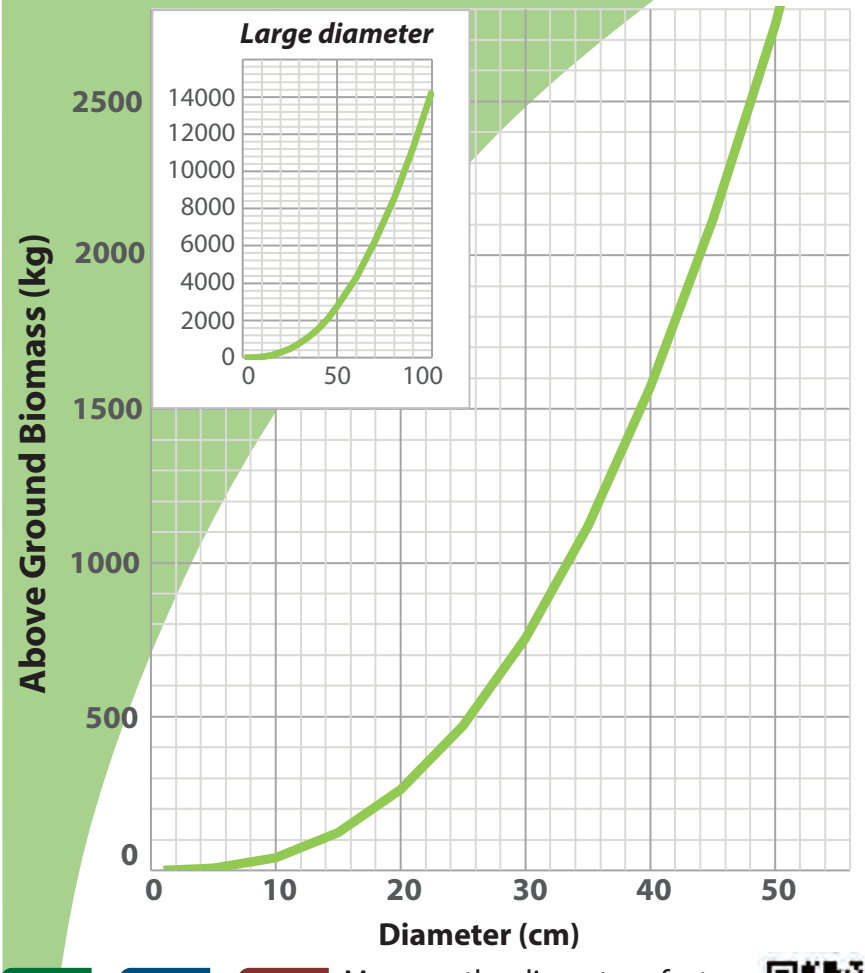


Eucalyptus, *Eucalyptus globulus Labill*

Bark: peels off in strips revealing smooth white, gray, tan, or brownish-red color beneath. **Leaves:** long, slender, oval, taper to a point, averaging 7-10 centimeters in length. Tops are leathery, waxy, grey to blue-green, hang downwards. **Flowers:** fluffy stamens colored white, cream, yellow, pink, or red. **Other features:** Tall thin branches, evergreen, meaning it keeps its leaves year-round. Distinctive camphoraceous smell, often described as medicinal.

Calculate the biomass of Eucalyptus



Chave et al., 2005, Oecologia

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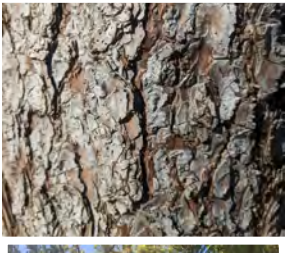
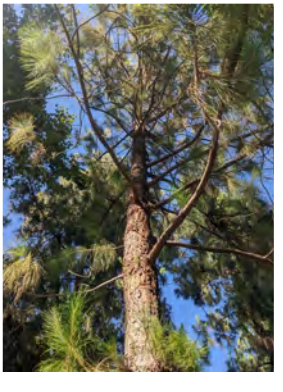
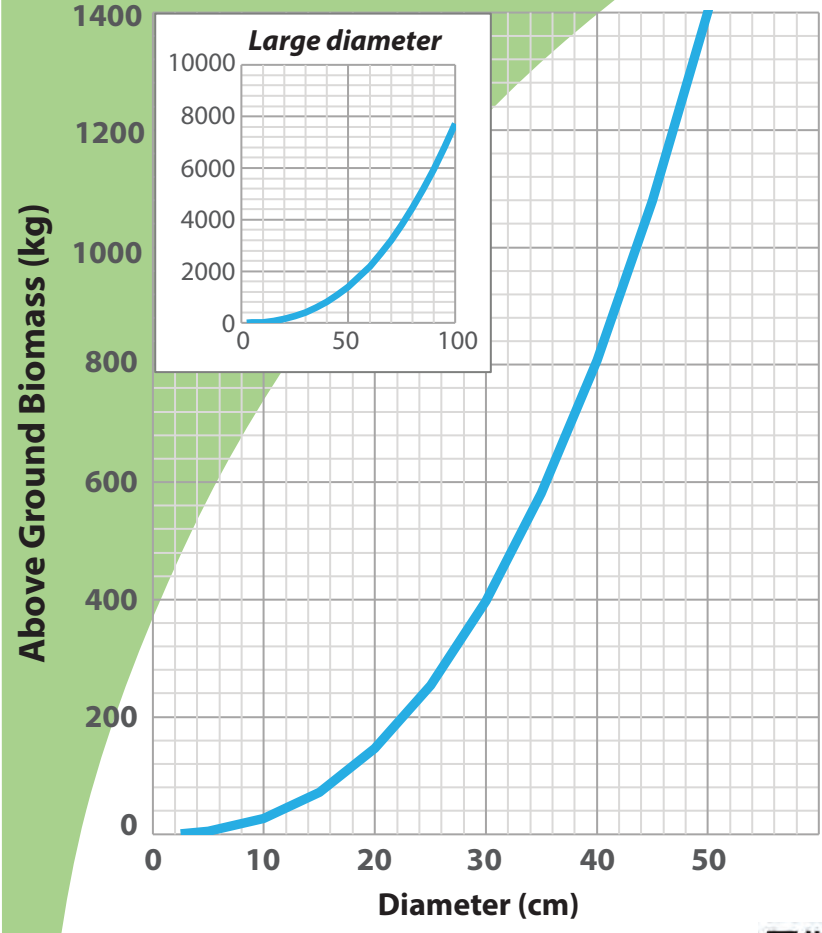




White Pine, *Pinus strobus*

Bark: thin, scaly, and grayish. **Needles:** Soft, thin, 4–10 cm long, clumps of 5 at the ends of upswept branches. **Cones:** overlapping scales that open to release pollen and produce tiny seeds. Can be up to 8 inches long and 1 inch wide. **Other features:** Narrow and grow 50-100 feet tall.

Calculate the biomass of White Pine



Chojnacky et al., 2014, Forestry

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