

Oplopanax horridus (Sm.) Miq.

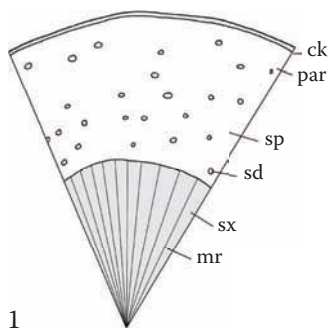
Devil's Club Root

Oplopanax Radix

Araliaceae

Devil's club is native to North America and is abundant in old-growth forests of Oregon, Washington, and many parts of Canada and Alaska. Among Native Americans, it is considered a sacred and very powerful medicine both physically and ritualistically. It is a member of the ginseng Araliaceae family and is considered by many to have adaptogenic properties similar to *Panax* species plants, though substantiation for this is lacking.

Transverse section: Cork, phelloderm with angular collenchyma; narrow outer parenchyma without medullary rays consisting of spheroidal parenchyma cells and secretory ducts containing orange-brown secretion; secondary phloem is broad and cells are loosely arranged in the outer part and more compact toward the vascular cambium; numerous secretory canals contain orange-brown secretion partly arranged in concentric rows, tangentially elongated canals, up to 200 μm diameter; medullary rays are one or two cells broad; secondary xylem is compact, with vessels up to 40 μm in diameter scattered in masses of slightly thickened fibers; medullary rays are one or two



cells broad and cells are partly pitted; cluster crystals of calcium oxalate up to 30 μm diameter and starch occur in all parenchymatous tissues.

Longitudinal section: Vessels with reticulate or scalariform walls; fibers with oblique pits.

Starch: Simple or compound granules, roundish or subspherical, 3–8 μm diameter (only rarely up to 14 μm); punctate hilum visible in large granules.

Powder: Fragments of cork in surface view; fibers and vessels in longitudinal section; parenchyma cells, some with orange-brown contents or calcium oxalate cluster crystals; secretory canals in longitudinal section; starch.

Differentiation between *Panax ginseng* and *Oplopanax horridus*

The secondary xylem of *P. ginseng* consists mostly of parenchyma, whereas that of *O. horridus* consists primarily of fibers. Overall, the wood of *O. horridus* has a much denser and more regular appearance (compare photomicrographs of the root transverse section of each species). In addition, the secretory ducts of *P. ginseng* are considerably smaller in diameter (up to 120 μm) compared to those of *O. horridus* (up to 200 μm).

