Berberis aquifolium Pursh, *B. nervosa* Pursh, *B. repens* Lindl.

Standardized Common Name: Oregon Grape

Other Common Names: Oregon Barberry, Oregon Grape Holly

Family: Berberidaceae

Parts in Commerce: Rhizome and root

Identification:

- Long, cylindrical, sometimes branching, bearing occasional rootlets
- Mostly (3–)5–10(–15) mm in diameter; largest pieces at top of rootstock may be up to 4.5 cm in diameter, often somewhat knotty or contorted
- Outer bark yellowish brown to olive, longitudinally wrinkled with small cracks, often becoming scaly
- Fracture hard
- In cross-section, root has brownish-green or brown, easily separating, sometimes thick and lumpy cork; thin yellowish or pale brown ring of pericycle and phloem; large yellow wood containing numerous narrow rays of xylem and narrow, sometimes curving parenchyma rays (annular rings may be visible in older material)
- Rhizome in cross-section similar, having a broad ring of yellow xylem with a radiating appearance and a yellow, sometimes off-center pith
- Wood becomes darker yellow when moistened
- Taste bitter
- Chewing colors saliva yellow

Adulterants: According to Youngken, not more than 5% of aboveground stems should be allowed. Stem bark may be pale yellow or grayish or purplish brown, and often peels off in long strips. Stem wood may be white rather than yellowish.

Taxonomy: As broadly defined, *Berberis* includes about 500 species. It has been divided by some authorities into two genera, *Berberis* and *Mahonia*. These do not appear to be clearly differentiated or natural groups, so are seldom separated by modern taxonomists. *Mahonia* is still recognized in much nontaxonomic literature, where commonly encountered synonyms for the above species are *M. aquifolium* (Pursh) Nutt., *M. nervosa* (Pursh) Nutt., and *M. repens* (Lindl.) G. Don. *Berberis repens* and *B. aquifolium* were once treated as varieties of a single species and are similar except in size, the former being much smaller.

References:

Piper CV. The identification of *Berberis aquifolium* and *Berberis repens*. *Contrib U. S. Natl Herbarium*. 1922;20:437–452.

Whittemore AT. *Berberis*. In: Flora of North America Editorial Committee, eds. *Flora of North America*. Vol. 3. New York, NY: Oxford University Press; 1997:276–286.

Youngken HW. *Text-Book of Pharmacognosy*, 5th ed. Philadelphia, PA: The Blakiston Company; 1943:339–340.

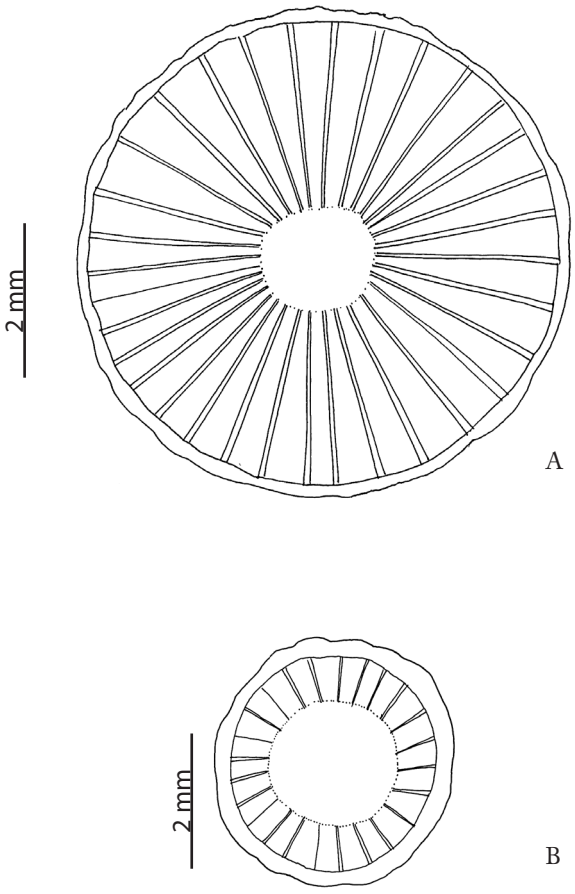

Figure 12: a, *Berberis aquifolium* rhizome cross-section; b, small rhizome of *B. repens*.

Description: Evergreen shrubs, often low or creeping, sometimes erect and 2 m tall or more (never in *B. repens*). Leaves alternate, pinnately compound with terminal leaflet stalked, lateral leaflets sessile, pointing towards leaf apex; terminal leaflet 3–9.5 cm long (variable among and within species), lateral leaflets all similar in size or the lower leaflets largest; texture usually thin and flexible, occasionally thick and stiff; bases asymmetrical; margins dentate, with teeth spine-tipped, number of teeth per side variable, at least 6 (occasionally 5 in *B. aquifolium*). Inflorescences racemose, terminal, crowded, many-flowered. Flowers yellow, 3–8 mm in diameter; sepals 6, quickly lost; petals 6, producing nectar; stamens 6; ovary compound, 1-styled. Fruit a berry, blue, glaucous, juicy, usually oblong-ovoid, 6–11 mm long, few-seeded.

The three official species differ in vegetative morphology:

	B. aquifolium	**B. nervosa**	**B. repens**
Number of lateral leaflets	2–4 pairs	4–10 pairs	(1–)2–3 pairs
Lateral leaflet shape	Broadly lanceolate to lanceolate-elliptic or narrowly ovate	Lanceolate-ovate to ovate	Ovate or elliptic, sometimes broadly
Lateral leaflet apices	Acute to obtuse or rounded	Acute to acuminate	Rounded to obtuse or broadly acute
Leaflet surfaces	Both surfaces glossy, smooth	Both surfaces dull, smooth; upper surface somewhat glaucous	Dull and often papillose below, dull and glaucous or rarely glossy above
Lateral leaflet venation	1 or 3 basal veins	4–6 basal veins (midrib and weaker secondary veins)	1 or 3 basal veins