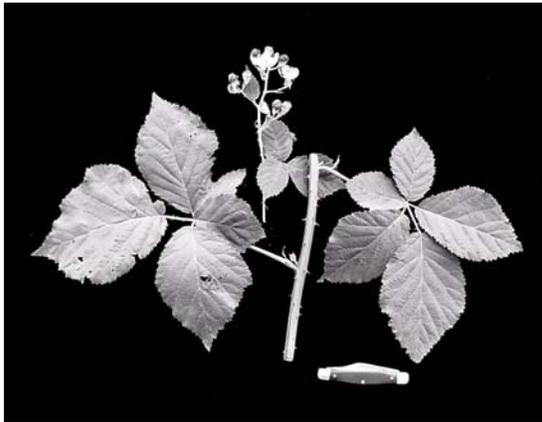


***Rubus discolor* Weihe & Nees**  
ROSACEAE

Himalayan blackberry

Synonyms: *Rubus procerus* auct. non P. Muell. ex Genev  
*Rubus fruticosus* L.  
*Rubus macrostemon* (Focke) Sampaio  
*Rubus thyrsanthus* (Focke) Foerster.  
*Rubus praecox* Bertol.  
*Rubus grabowskii* Weihe ex Gunther et al.



**General Description.**—Himalayan blackberry, also known as Armenian blackberry or just blackberry, is a deciduous to evergreen, spiny, arching woody shrub that may reach heights of 4 m with stem (cane) lengths up to 10 m. The multiple stems are fluted with stout, red, straight or recurved prickles along ridges. The canes grow straight upward at first but arch as they become long. The root crown may reach 20 cm in diameter; the root may penetrate up to 1.5 m into the soil, and lateral roots extend 30 to 60 cm. The bark is green to purplish-red. The 7- to 20-cm-long leaves are usually penta-foliolate except on fruiting branches where they can be trifoliolate or unifoliolate. The petioles, rachises, and lower surfaces of the midveins are also armed. The blades are 3 to 12 cm long, ovate to orbicular, dark green, and have biserrate margins. The white to pink, five-petaled flowers 2- to 2.5-cm broad are borne three to 20 in terminal panicles. Fruits are aggregates 12 to 20 mm in diameter of black, juicy, sweet drupelets on a torus (central core). Each drupe contains one hard, flattened seed that is covered with a fine network of pits and ridges (Brayshaw 1996, Bruzzese 1998, Starr and others 2003, Welsh and others 1987). Luther Burbank introduced the fruit cultivar he called Himalayan blackberry in 1885. After its release to gardeners, it quickly spread to

wildlands on the West Coast and later to other parts of the United States (Jacobson 2001). Taxonomists disagree on its identity. Some maintain that it is in fact *Rubus armeniicus* Focke (Ceska 1999). Himalayan blackberry hybridizes with *R. thyrsiger* Banning & Focke, *R. calvatus* Lees ex Bloxam, and *R. schlechtendalii* Weihe ex Link (Tirmenstein 1989).

**Range.**—Himalayan blackberry originated in the Old World, probably Europe. It has been under semicultivation for a long time and has escaped into the wild in Western and East-Central United States, Hawaii, parts of Europe, Australia, New Zealand, South Africa, and probably southern South America (Ceska 1999, Natural Resources Conservation Service 2003, Starr and others 2003). In many populations, it is not always clear from the literature whether it is Himalayan blackberry or other closely related taxa.

**Ecology.**—Himalayan blackberry grows in vacant lots, logging sites, burned areas, along rivers, roads, fences, and railroad tracks. It grows best in full sunlight but does well under a light forest cover. However, it will not grow under a dense canopy. Himalayan blackberry colonizes most soil types in moist areas but is confined to riparian areas and the edges of irrigated fields in interior dry climates. It grows at elevations from near sea level on the West Coast to 1,500 m in the inland West (Welsh and others 1987). Himalayan blackberry is confined at the northern extent of its range to mild coastal areas and low-elevation, sheltered inland sites. It tolerates periodic flooding of fresh or even brackish water. The species vigorously sprouts from root systems after fires (Tirmenstein 1989).

**Reproduction.**—Himalayan blackberry commonly flowers from June to August. The flowers are intensely visited by honey bees, but insect pollination is not necessary for seed

production. In fact, sexual reproduction may be rare; 17 samples from Himalayan blackberry plants collected throughout Australia proved to have no genetic variation (Evans and others 1998). Good seed crops are produced nearly every year (Tirmenstein 1989). There are 324,000 cleaned seeds/kg. The seeds are dispersed by birds and mammals as well as by gravity. Passing through birds and mammals is reported to increase germination by 30 percent in the first year (Bruzzese 1998). Seeds in the soil seed bank remain viable for several years (Brinkman 1974). Stands in Victoria, Australia have been estimated to produce 7,000 to 13,000 seeds/m<sup>2</sup>/year (Bruzzese 1998). Himalayan blackberry seedlings commonly appear after fires or disturbance that exposes the soil and allows sunlight to reach the surface. Once seedlings become established, most subsequent reproduction is vegetative. Plants reproduce by sprouts from rhizomes and by layering (rooting) at the nodes when stems come in contact with the ground.

**Growth and Management.**—Canes do not bloom during their first year in which they make most of their growth (2 to 8 m of elongation). Canes bloom and fruit in their second and sometimes third years and die at the end of their second or third years. Individual root crowns live a maximum of 7.5 years in Australia (Bruzzese 1998). By suckering from rhizomes and layering, plants (clones) can endure almost indefinitely. Live biomass of a stand in Victoria, Australia totaled 3.1 tons/ha (59 percent above-ground and 41 percent below-ground) and 27 tons of dead canes and litter (Bruzzese 1998). Scarification is required for prompt germination. Although several methods will work, soaking in concentrated H<sub>2</sub>SO<sub>4</sub> for 50 to 60 minutes followed by 90 days of cold stratification is recommended. About 33 percent germination in about 70 days can be expected. Sowing in late summer for spring germination can substitute for artificial cold stratification. Sowing depth is 3 to 9 mm. (Brinkman 1974). The species can be propagated by digging up and replanting suckers. However, many more plants can be started by using root cuttings. Root pieces between 3 and 13 mm in thickness and 10 to 18 cm long are recommended. They are grown for 1 year in the nursery bed before outplanting (Shoemaker 1978). Himalayan blackberry can be troublesome in many habitats and is a potential threat to native ecosystems in places such as Hawaii (Starr and others 2003). Plants can be eliminated by grubbing with follow-up treatment a year later, repeated mowing, and by pasturing with goats (Cox 2003).

Several herbicides are effective using foliar spray, stem injection, treatment of cut stumps, and basal spray methods (Starr and others 2003, Tirmenstein 1989). Dead canes accumulate in older stands and are as much a nuisance to remove as the plants themselves. Because of dormant seeds in the soil, checking and retreatment for many years may be required to completely eliminate the species.

**Benefits.**—Himalayan blackberry provides food and cover for many mammals and birds. It is little used by domestic livestock except for goats. However, deer, elk, rabbits, porcupines, beavers, and mountain beavers consume leaves, buds, twigs, and cambium, especially during the winter months. A large number of species consume the fruits and a number rely on the thickets of stems for escape and reproductive cover (Tirmenstein 1989). Himalayan blackberry fruits are among the most delicious of wild fruits but are difficult to pick because of the spines. They are eaten fresh, canned, used to flavor ice cream, and made into pies, jams, jellies, juices, and wines. Some people object to the seeds getting caught in one's teeth when eaten whole, but it is a minor inconvenience that can be avoided by juicing the fruit. In spring, the succulent canes can be peeled and eaten, fresh or cooked (Jacobson 2001). The brambles are allowed to grow over fences and trellises to create barriers almost impenetrable to people and livestock. While the species does protect the soil from erosion and helps revegetate disturbed sites, the thickets and mounds of brambles restrict movement of hikers and woods workers, and suppress other vegetation and slows succession.

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