

## 2 PACHYSTIMA Raf. Am. Month. Mag. 1818.

Low evergreen shrubs with opposite leaves, and small flowers in 1-few-flowered axillary cymes. Calyx with a short obconical tube and four rounded lobes. Petals 4. Stamens 4, inserted at the edge of the broad disk which lines the calyx-tube. Ovary free, 2-celled: style very short: capsule 2-valved, 1-2-seeded. Seeds enclosed in a white, many-cleft membranous aril.

**P. Myrsinites** Raf. l. c. Densely branched to nearly simple, 1-3 feet high: leaves smooth, ovate to lanceolate, cuneate at base, the upper half serrate or serrulate,  $\frac{1}{2}$ -1 in. h long on very short peduncles: flowers a line or two long: fruit 2 lines long, smooth. In the mountains, from Brit. Columbia to California and the Rocky Mountains.

## ORDER XXII. RHAMNACEÆ Dumort. Fl. Belg. 102.

Trees or shrubs, the branches often thorny. Leaves simple with minute stipules. Flowers small, sometimes by abortion dioecious, monoecious or polygamous. Calyx 4-5-cleft, valvate in the bud. Petals distinct, cucullate, (each wrapped around a stamen) narrowed at base, inserted upon the throat of the calyx, sometimes wanting. Stamens as many as the lobes of the calyx and alternate with them. Ovary 2-4, united carpels, 2-4-celled, free from or usually cohering with the tube of the calyx or more or less immersed in the fleshy perigynous disk: ovules solitary, erect. Styles more or less connate: stigmas simple usually distinct. Fruit free or commonly more or less cohering with the calyx, fleshy and indehiscent or with the carpels dry and at length separable. Seeds erect, anatropous, with a large, straight embryo in sparing fleshy albumen.

1. **Rhamnus**. Calyx and disk free from the ovary: calyx-lobes erect or spreading: fruit berry-like.
2. **Ceanothus**. Calyx and disk adnate to the base of the ovary: calyx-lobes connivent. Fruit dry or nearly so.

## 1 RHAMNUS L. Gen. n. 265 in part.

Shrubs or small trees with alternate petioled pinnately veined leaves, small deciduous stipules and axillary cymose or racemose flowers. Flowers perfect or polygamo-dioecious. Calyx 4-5-cleft, with erect or spreading lobes, the campanulate tube lined with the disk and persistent. Petals 4 or 6 or more, inserted on the margin of the disk: claws short. Stamens 4 or 5: filaments very short. Ovary free, 2-4-celled: style short, 3-4-cleft. Fruit baccate, containing 2-4 cartilaginous 1-seeded nutlets, mostly indehiscent.

§ 1 RHAMNUS Brongn. Ann. Sc. Nat. x, 360. Seeds and nutlets deeply sulcate or concave on the back, the raphe in the hollow: flowers mostly dioecious, solitary or fascicled in the axils.

**R. alnifolia** L'Her. Sert. Angl. 5. Shrub 2-4 feet high: leaves deciduous, ovate-oblong, acute at each end or acuminate, 2 or 3 inches long, crenately serrate, the slender petioles slightly puberulent: lobes of the