

H. violacea Wheelock Bull. Torr. Club xxiii, 71. *Suksdorfia violacea* Gray. Viscid-pubescent throughout: stems slender, 6-10 inches high, from a small bulb-like caudex which is covered with bubbllets that are borne in the axils of the radical leaves: lower leaves round-cordate, crenately lobed and toothed, on slender petioles with scarious dilated base, upper ones obovate, 3-5-lobed, on short petioles with foliaceous stipular base: petals violet, entire or sometimes 2-3-lobed, spatulate, attenuate below to a long claw, 5-6 lines long, much longer than the acuminate at length connivent lobes of the calyx: capsule oblong; carpels united to near the top, the short beaks diverging: seeds oblong, with a close light-colored testa. On moss-covered rocks, along the Columbia river near Viento Oregon and on the opposite side of the river near the mouth of the White Salmon river.

9 LEPTAXIS Raf. Fl. Tel. ii. 75.

TOLMIEA T. & G. Fl. i, 582; not Hook.

Perennial herbs with cordate leaves on long petioles bearing a bud at the base of the blade, and simple stems with long ebracteate racemes of purple flowers on short pedicels. Calyx cylindrical, free from the ovary, unequally 4-cleft, the tube split down the lower side and gibbous at base, imbricate in the bud. Petals 4, filiform, entire, inserted between the lobes of the calyx, persistent. Stamens 3, scarcely exerted, inserted into the throat of the calyx opposite the three larger lobes: filaments subulate, unequal: anthers reniform, 2-celled, the cells confluent at the apex. Ovary stipitate at base, 1-celled, with two parietal placentæ; stigma obtuse. Capsule 1-celled, many-seeded, 2-valved at the apex, the valves equal. Seeds small, globose, muricate-hispid.

L. Menziesii Raf. l. c. 76. *Tolmiea Menziesii* T. & G. Hispid-pubescent throughout: stems clustered, 1-3 feet high, from a creeping branched caudex: leaves cordate, acute, obscurely lobed and repandly cuspidate-toothed, ciliate, 1-4 inches long, the lower on long petioles, the upper ones with petioles successively shorter until they become sessile bracts: racemes many-flowered, elongated; calyx cylindraceous, purple-veined, the upper lobes oblong, obtuse, the lower one narrow, acuminate, shorter; petals brown, filiform, somewhat dilated in the middle, recurved; filaments subulate, the upper one inserted lower down on the tube of the calyx than the other 2: capsule oblong, 2-valved, the valves beaked with the indurated styles, the valves spreading in age. Common along mountain streams from Brit. Columbia to California.

10 TELLIMA R. Br. App. Frankl. Journ. 765.

Perennial herbs with roundish-cordate leaves on petioles with dilated and somewhat stipuliform base and rather large flowers in elongated simple somewhat spicate racemes. Calyx campanulate, obconic and coherent with the ovary at base, free and inflated above, 5-toothed, valvate in the bud. Petals 5, inserted in the throat of the calyx, laciniate-pinnatifid, deciduous. Stamens 5 or 10, inserted on the tube of the calyx; anthers 2-celled, ovate. Styles 2, short and distinct: stigmas capitate, obscurely 3-lobed. Capsule 1-celled with 2 parietal many-seeded placentæ, 2-beaked, opening between the beaks. Seeds horizontal.

* Stamens 10.

T. Grandiflora R. Br. l. c. 759. Hispid-pubescent throughout, glandular above: stems clustered, 1-2 feet high, from stout short tufted rootstocks: leaves round-cordate, 2-4 inches in diameter, 3-9-lobed, the lobes coarsely toothed, prominently reticulate-veined, on long petioles with scarcely dilated base, the few cauline ones smaller and nearly sessile: flowers not fragrant, on short reflexed pedicels: calyx 4 lines long, thick-cylindrical, with turbinate tube and short triangular erect lobes, inflated, coherent with the ovary only at the base; petals lanceolate in outline, laciniately cut into long filiform segments, abruptly narrowed below to a short claw, soon bent at the lower third, the upper part closely reflexed, bright red; styles short, persistent, with broad flat stigmas, approximate: capsule ovate, open at the top, the indurated styles divergent in fruit: seeds oblong, tuberculate. Common in moist woods, Brit. Columbia to California.

T. odorata. Coarsely pilose below, glandular-pubescent above: stems rather slender, clustered, 1-2 feet high, from a multiceptal caudex: leaves broadly cordate, acute, obscurely lobed and crenately toothed, 1-3 inches long, on long petioles with dilated scarious base, the few cauline ones smaller and nearly sessile: flowers fragrant, numerous, on short pedicels in a long terminal raceme; calyx campanulate, the inflated tube 3-4 lines long, coherent with the lower half of the ovary, the oblong erect lobes about half as long as the tube: petals red, lanceolate in outline, laciniately cut into long filiform segments, narrowed below to a long claw, bent at the middle, the upper half spreading or at length loosely reflexed; styles short, with broad capitate stigmas: capsule elliptical, the very short styles divergent in fruit: seeds oblong, rough tuberculate. In wet places and springs, along the Columbia river near the Cascades to southern Oregon.

* Stamens 5.

T. racemosa Greene Eryth. iii, 55. *Heuchera racemosa* Watson. "Glandular-hispid, leaves reniform-cordate, crenately lobed and toothed, 1 or 2 inches broad: flowering stems 4-10 inches high, bearing 2 or 3 petiole leaves and a loose few (6-15) flowered raceme; pedicels short (a line long or less): calyx very broadly campanulate, 2 (becoming 3) lines long, acutely lobed; petals glandular, linear, entire and acuminate or more or less laciniately toothed toward the top, a little exceeding the calyx-lobes: stamens 5, very short, opposite to the calyx-lobes: styles very short; capsule sub-globose, very shortly beaked: seeds very numerous, brownish, with wrinkled testa, not muricate." On cliffs of Mount Adams Washington at 7-8000 feet altitude. *Suksdorf.*

11 LITHOPHRAGMA Nutt. Journ. Acad. Phila. vii, 26.

Small and slender herbs with fibrous at length grumous roots, 3-5-parted or lobed leaves on petioles with stipuliform base and rather large flowers in simple few-flowered racemes. Calyx cyathiform or campanulate, coherent with or free from the lower part of the ovary: the limb short, 5-cleft, valvate in the bud. Petals 5, inserted in the sinuses of the calyx just below the margin, cuneiform, unguiculate, much exserted, 3-cleft, or rarely entire, deciduous. Stamens 10, inserted in the throat of the calyx: anthers cordate, 2-celled. Styles 2-3, short; stigmas obtuse or somewhat dilated. Capsule 1-celled with 2-3 parietal many-seeded placentae, 2-3 valved at the apex. Seeds horizontal, ovate, with a distinct raphe; the testa smooth and membranaceous.