

Western Canada Violet *Viola canadensis*

Violaceae—Violet family

by Tom Reaume © 2010 Nature Manitoba

Grant: The Winnipeg Foundation, Triple A Fund

A perennial wildflower 10–60 cm tall, in small clumps from a tan, rough, usually **vertical rhizome** 1–5 cm long by 4–7 mm wide, rough, with well branched **roots** 1–10 cm long by 0.3–1 mm wide, pinkish white, pointed **crown buds** 1–2 cm long developing in the fall; **horizontal rhizomes** tan, 2–20 cm long by 1–3 mm wide; found in damp meadows, mountain brush, thickets, open woods and along rivers banks.

● **FLOWERS** white with pinkish purple on back and sometimes on the front of petals, throat yellow, blooming April–September; **inflorescence** of single flowers from the upper leaf axils; **peduncles** 1–8 cm long by c. 0.7 mm wide, glabrous to slightly hairy along the 2 low ridges on either side of the shallow groove and at the base of the pair of subopposite, 3–4 mm long bracteoles; **flowers** perfect, 12–17 mm wide by 8–15 mm long; **sepals** 5, green, glabrous to ciliate, flat, 4–9 mm long by 1–1.3 mm wide, pointed, gibbous at base; **petals** 5, a flush of pink to violet on the backs of at least the 2 upper petals, the 3 other petals have dark purple throat veins and the 2 side petals have small white beards in the inner yellow area; **upper petals** 2, each 4–7 mm wide; **side petals** 2, each 11–14 mm long by 5.5–10 mm wide, hairy in the yellow throat, the hairs c. 1 mm long, clumped along the outside of the midrib; **lower petal** one, hairless, 12–15 mm long by 8–11 mm wide; **spur** c. 2 mm long and wide, from the base of the lower petal, pale green, blunt, not reaching the peduncle; **stamens** 5, wrapped around the pistil, together 2.5–4 mm long by c. 4 mm wide by 2.5–2.9 mm thick, 2 with a green blunt spur fitting into the spur of the lower petal; **filaments** pale green, c. 1.7 mm long with a winglike apical orange appendage c. 1 mm long, ending just below the stigma; **anthers** pale yellow, 2.3 mm long by c. 1.3 mm wide, lobed, pale yellow, almost as wide as and attached their full length to the filaments; **pollen** yellow; **pistil** one, 4.2–5 mm long, green, hairless; **ovary** 2.1–2.3 mm long by 1.3–1.5 mm wide and thick, bluntly triangular, glabrous to slightly hairy above, tapered to base of style, base truncate; **ovules** white, c. 30, each 0.4 mm long by c. 0.3 mm wide and thick; **style and stigma** together 2–2.3 mm long; **style** c. 0.4 mm thick, expanding near the stigma; **stigma**, smooth, slightly hairy along 2 sides, c. 0.7 mm long and wide; flower to fruit 2 months; **cleistogamous flowers** follow the earlier showy ones, appearing in late summer.

● **FRUIT** a capsule, 3-valved, 5–10 mm long, glabrous to slightly hairy; **open fruit** 1.5–2 cm wide with each valve 2–4 mm wide, facing up or down, remains on peduncle after opening; **seeds** dark brown to purplish black, 8–20 per capsule, each 1.6–2.3 mm long by c. 1.2 mm wide and thick, roundish with one low ridge, cottony hairs on body and ridge.

● **LEAVES** basal and stem, 3–5, widely heart-shaped, margins shallowly toothed, blades 3–13 cm long by 2.5–12 cm wide, hairy below on the raised, distinctive veins and less so on the blades, mostly hairless above on the ventral surface, veins hairy near petioles when young; **petioles** hairy when young, especially along the two upper ridges, white hairs 0.1–0.2 mm long, upper groove shallow, slightly convex, round below, glabrous with age, 2–22 cm long by 1.5–3 mm thick; **stipules** paired, 1–2 cm long by 4–6 mm wide, entire, pointed, thin, glabrous; **stem leaves** few, reduced above.

● **STEM** glabrous, erect, one to several; 2–5 mm wide near the base.

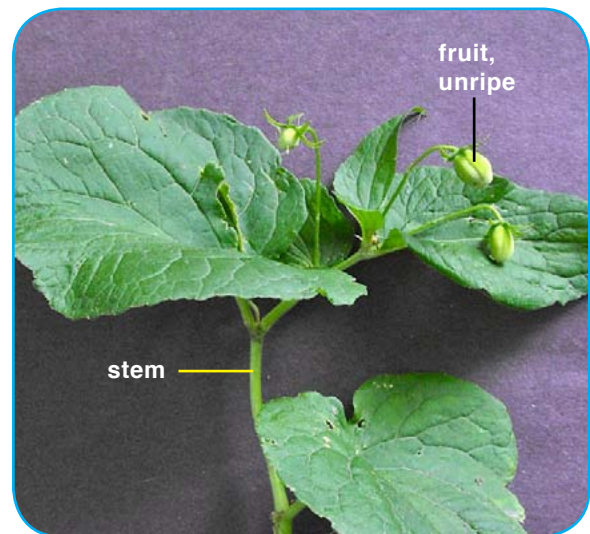
● **RANGE:** (CAN) 10 provinces; (USA) 39 states; a northern native.



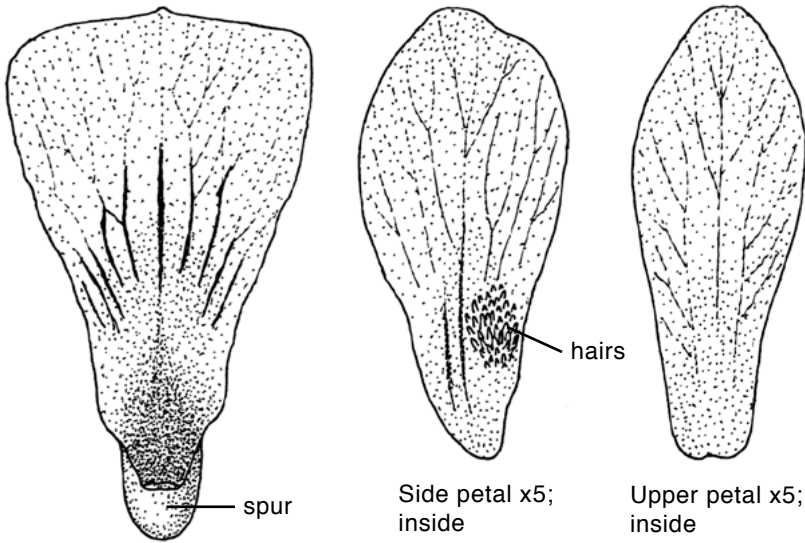
Patch of Western Canada Violets in bloom; Assiniboine Forest, Winnipeg, Manitoba



An early bloomer, young violets' leaves 2–3 cm tall



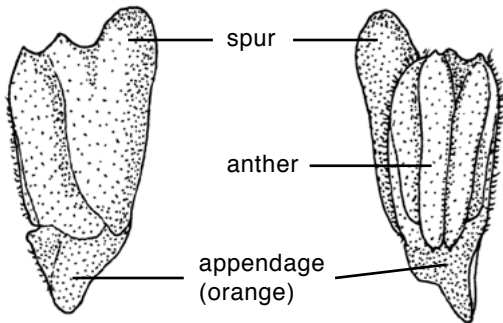
Three unripe capsules (middle one 6 mm long) from 3 leaf axils at the top of a plant in early July



Lower petal x5; ventral side

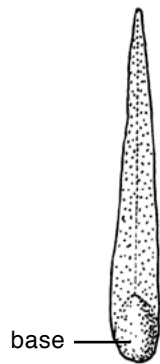
Side petal x5; inside

Upper petal x5; inside

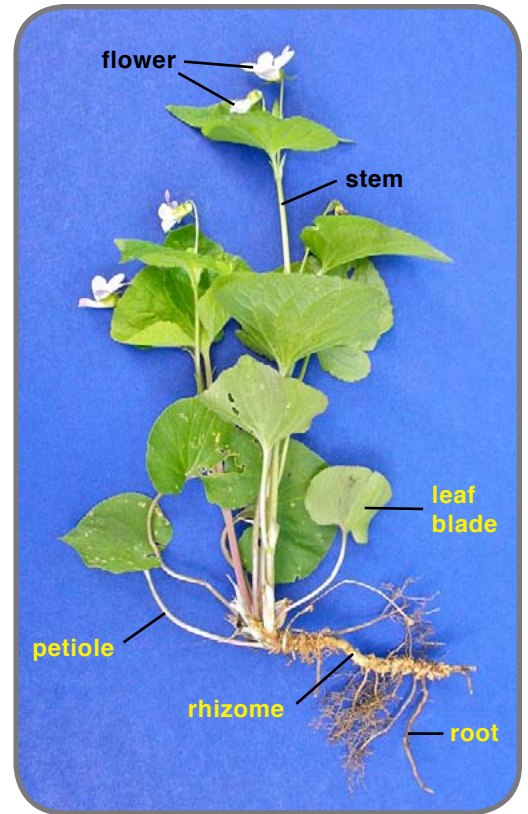


Stamen and spur x10; outside

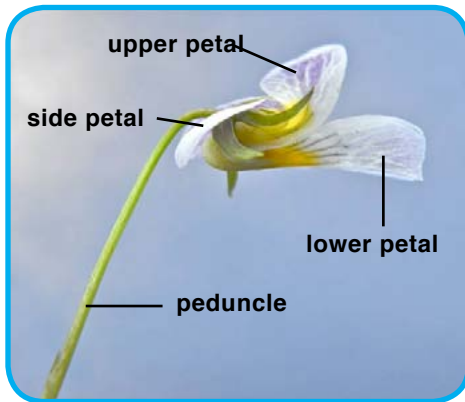
Stamen and spur x10; inside



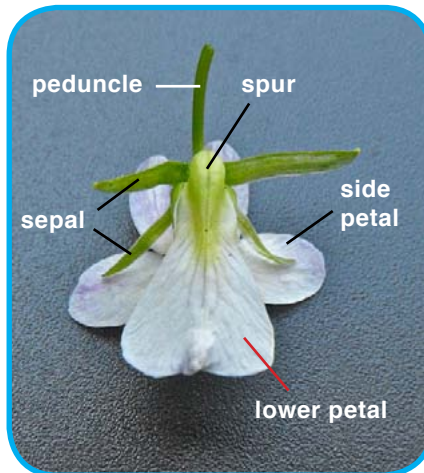
Sepal x5



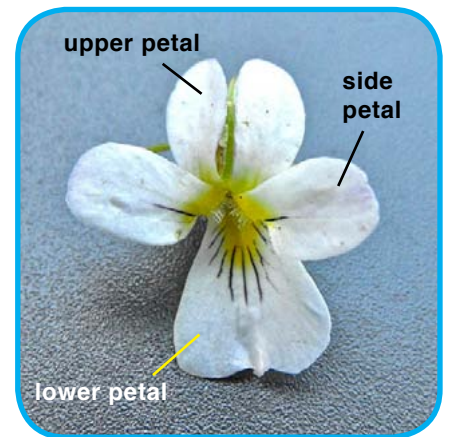
Reproductive plant 19 cm tall with several axillary flowers, buds and basal leaves



Western Canada Violet 1.7 cm long in Winnipeg; side view



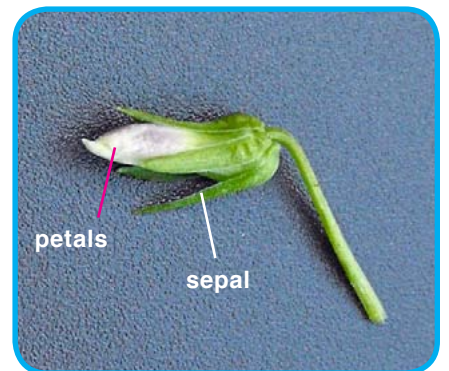
Violet 1.5 cm wide; front/below view



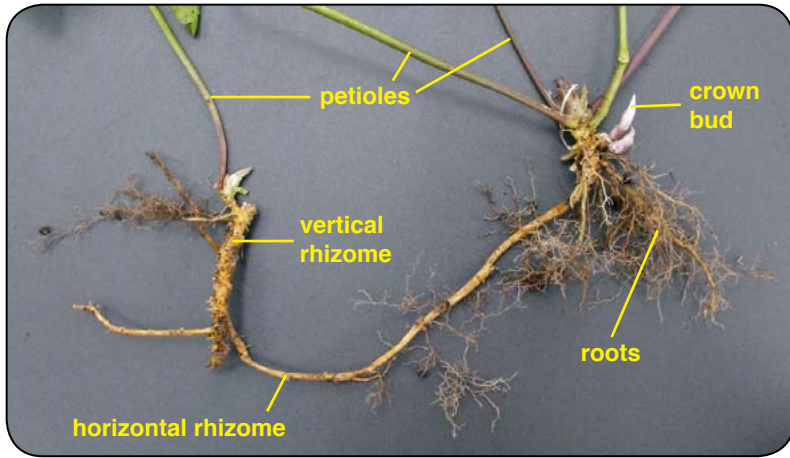
Violet 1.5 cm wide; front view



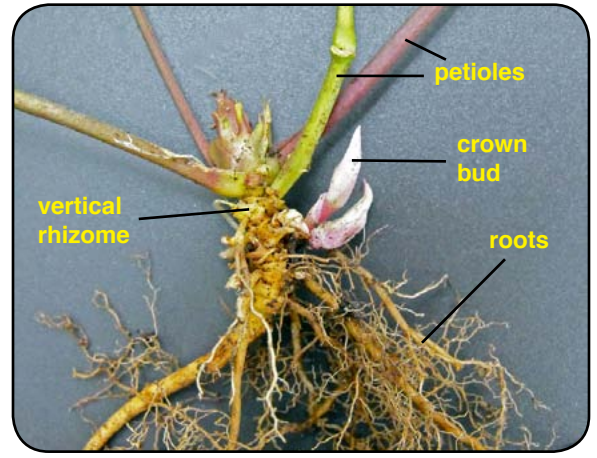
Rhizome 6 cm long, horizontal with tan roots at nodes



Violet flower bud 1 cm long; side view



In the fall Western Canada Violets develop crown buds before the winter in Winnipeg, Manitoba



Vertical rhizome with 4 petioles above ground and crown buds of next year's plants below ground



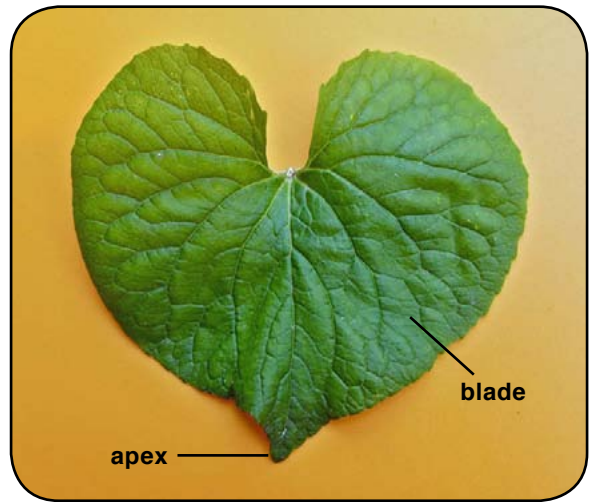
Unripe capsule 6 mm wide; side



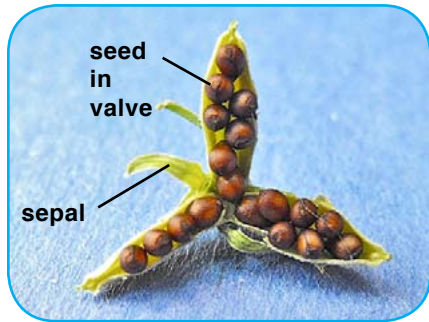
Unripe capsule 6 mm wide; above



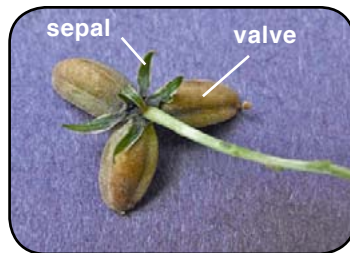
Unripe capsule 6 mm wide; below



Stem leaf 11 cm wide, ventral side,



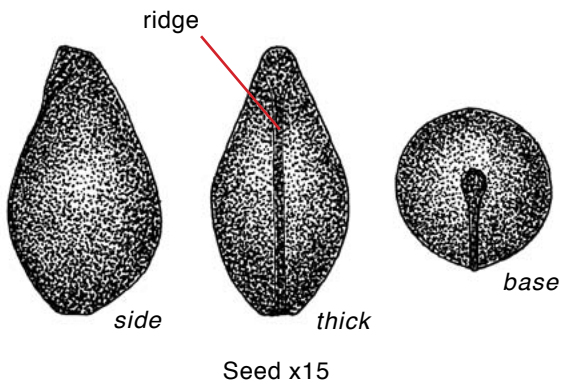
Fruit, 3-valved, open, above, valve tip to tip c 13 mm, 18 dark brown seeds



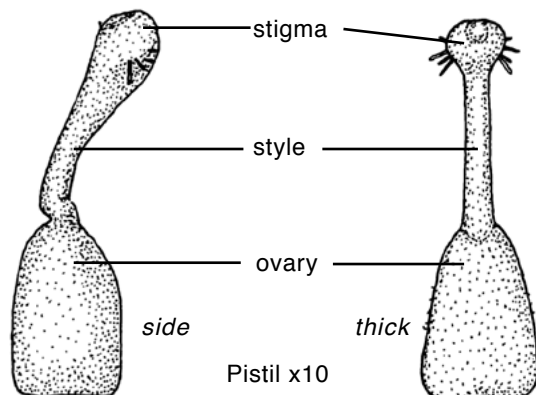
Fruit, 3-valved, open, above, 5 sepals green, curled



Leaf margin with shallow, forward pointing small teeth; dorsal side



Seed x15



Pistil x10