

Nodding Trillium *Trillium cernuum*

Liliaceae—Lily family

by Tom Reaume © 2010 Nature Manitoba

Grant:



A glabrous, long-lived **perennial wildflower** 15–52 cm tall from a solitary, brown, vertical **rhizome** 1.5–3.5 cm long by 8–15 mm wide with two sets of horizontal scars in spirals from apex to the decaying ragged base; **roots** tan, wrinkled for 1–4 cm out from the rhizome, 1–12 cm long by 0.5–2.5 mm wide and usually unbranched; **crown buds** up to 5 cm long develop atop the rhizome in late summer; in deciduous and coniferous woods, often in moist areas along waterways.

● **FLOWERS** White, blooming April–June; **inflorescence** a solitary, terminal, hanging flower from the top of the stem and below the three leaves (bracts); **pedicels** green, 1.5–7.2 cm long by 1–2 mm thick, stiff, descending; **flowers** perfect, odorless, 3–5.5 cm wide by 2–3.8 cm long, facing the woodland floor, usually hidden by the leaves; **sepals** 3, green, recurved, 14–34 mm long by 5–12 mm wide, pointed, persistent after fruit falls; **petals** white, 17–37 mm long 10–20 mm wide, recurved and some with the tips touching; **stamens** six (3 or 5), 7–12 mm long, exserted; **filaments** white, 3–6 mm long, ascending; **anthers** purplish (sometimes light yellow), 4–7 mm long; **pollen** whitish tan; **pistil** one, 9–13 mm long, exserted; **ovary** white, 6-sided, 6-ridged, 10 (7–16) mm long by 6 (5–10) mm wide; **ovules** per ovary 50 (24–101); **style** one, c. 2 mm long, tapered; **stigmas** 3, white, 3–4 mm long, erect, rough with recurved tips; **flower to fruit** 3 months.

● **FRUIT** a berry, indehiscent, soft, 6-ridged, ripens to a shiny red before falling from the sepals, 11–26 mm long by 10–32 mm wide, with a faint sweet odor when opened; **seeds** brown, 40 (11–158) per berry, each 2.4 (2–3) mm long by 1.7 (1.3–2) mm wide by 1.7 (1.4–2) mm thick, slightly rough from reticulation, with a fleshy, lipid-rich, whitish yellow elaiosome attached along one side; **elaiosomes** are eaten by some small creatures which aids in seed dispersal; **fruit** of double-stem plants averages twice as many seeds per berry (80 versus 40) as fruit of single-stem plants.

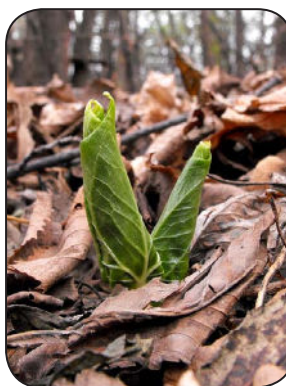
● **LEAVES** 3, bract-like, whorled at the top of the stem, erect at first, then spreading to slightly drooping at the tips, pointed, dull, entire but the blade margins undulate; **petioles** 0–5 mm long by 0–4 mm wide; **blades** 6.5–18 cm long by 6.2–18.3 cm wide, slightly shiny, lighter green with raised veins below (dorsal side); **young plants** begin with one leaf 1.3–5.8 cm long by 0.8–5.8 mm wide a few years before flowering.

● **STEM** a scape, erect, usually one, sometimes 2 on older plants, the 2 arising from opposite sides at the top of the rhizome which leaves paired stem scars that rotate 180° down the rhizome when a plant has 2 scapes a few years in a row; **scapes** weak, solid, roundly triangular, green becoming reddish near the 2.5–7 mm wide base; **paired scapes** are only a few mm apart at ground level and form a V as they lean away from each other; **scapes** fall before winter and rest on the ground for several months.

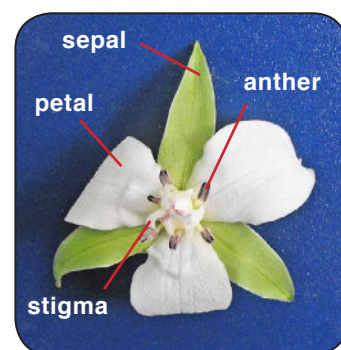
● **RANGE: (CAN)** 8 provinces (SK and east); **(USA)** 21 states; a northern, eastern **native** in North America.



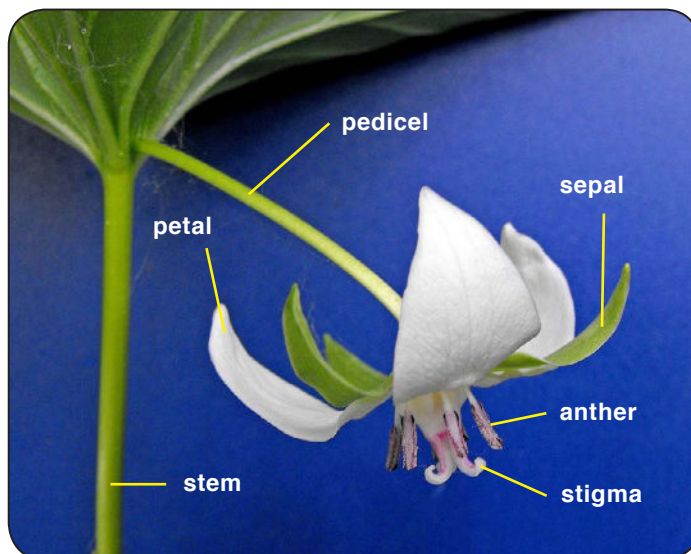
Nodding Trillium, each with three leaves, at base of Bur Oak in Assiniboine Park in Winnipeg, Manitoba



Emerging inrolled leaves of double-stemmed plant



Flower 3.5 cm wide; above



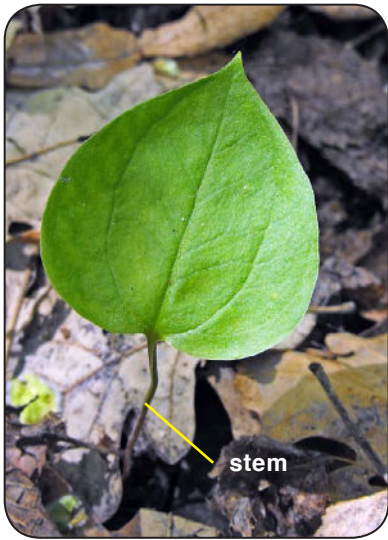
Flower 4 cm wide; side; white petals, green sepals



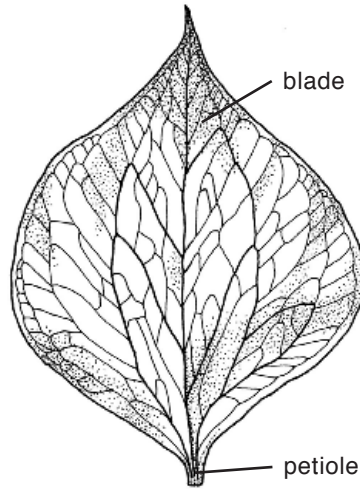
Flower; below



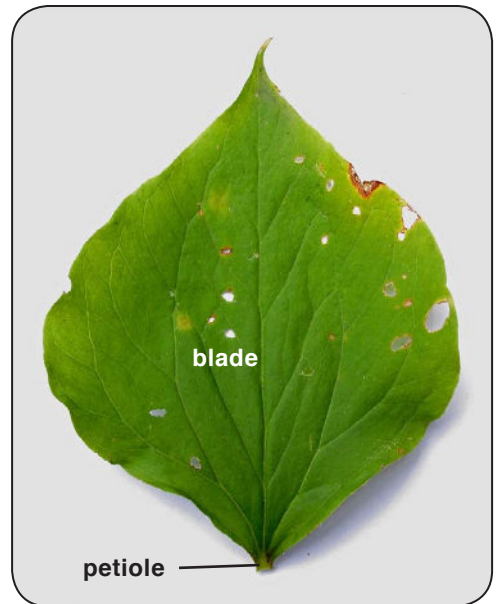
Flower bud 16 mm long; side



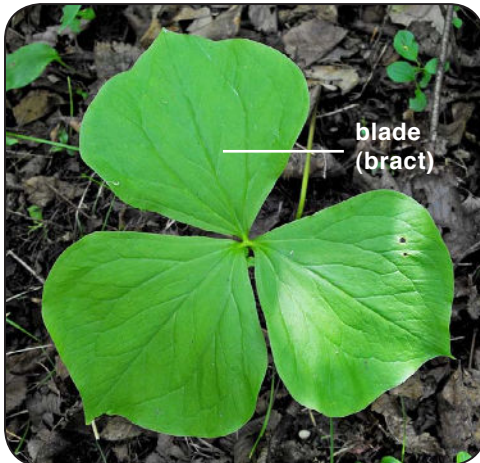
The first year, one leaf c. 3 cm long forms atop a weak stem



Leaf x0.7



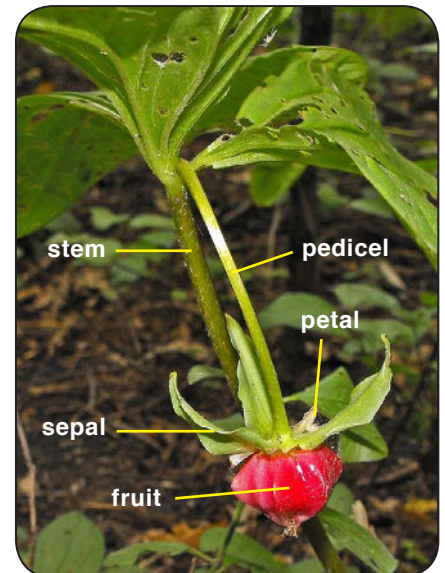
Leaf c. 12 cm long starting to disintegrate in early September; ventral (above) side



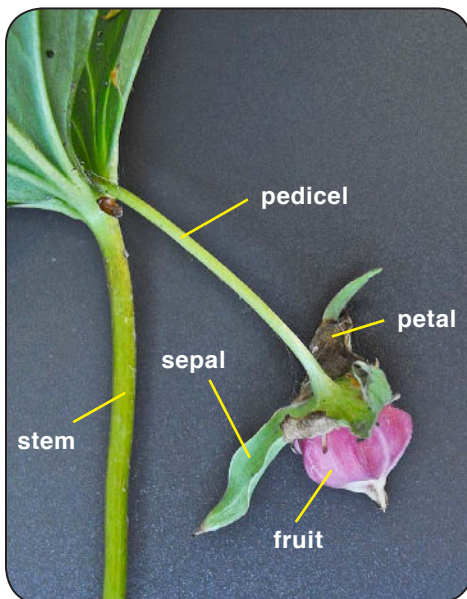
Young Nodding Trillium 3-leaf plant without a flower; maybe next year



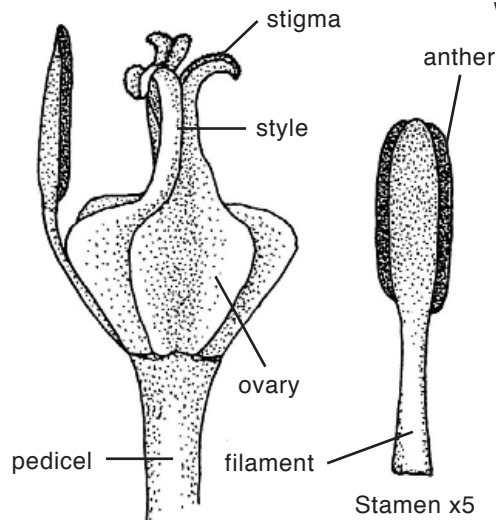
Two stem bases of a double flowering plant are a few mm apart at ground level



Ripe, red, shiny fruit (berry) 20 mm wide ready to drop to forest floor

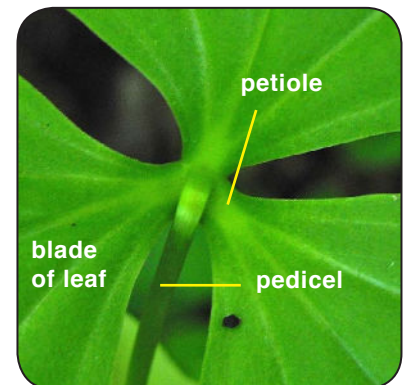


As fruit slowly ripens, it turns pink as the white petals wilt and turn brown

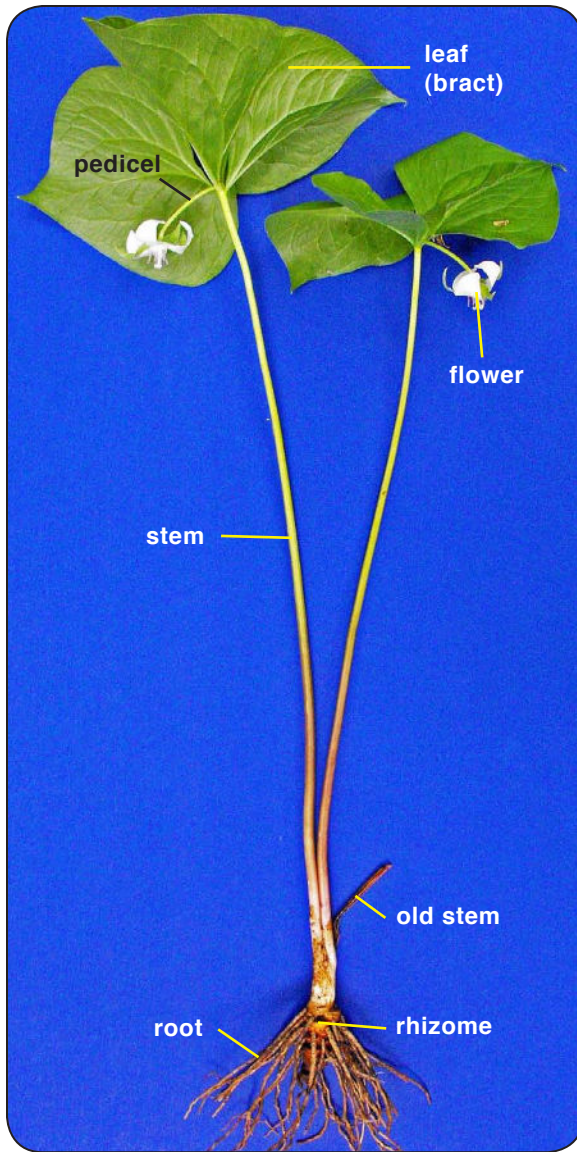


Pistil x6; and 1 stamen

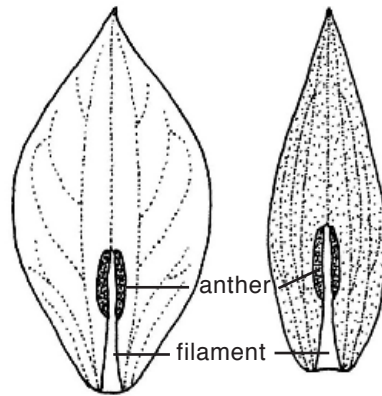
Stamen x5



Short wide petioles from above with pedicel reflexed between two of them

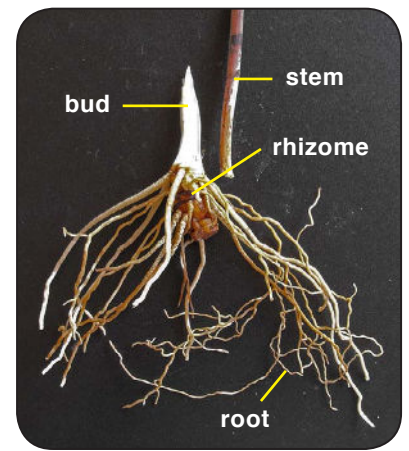


Nodding Trillium double (2 stems, 2 flowers) 56 cm tall

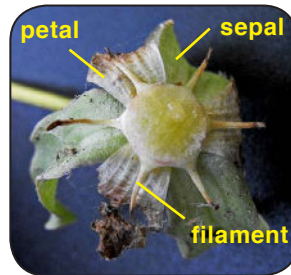


Petal x2, and stamen

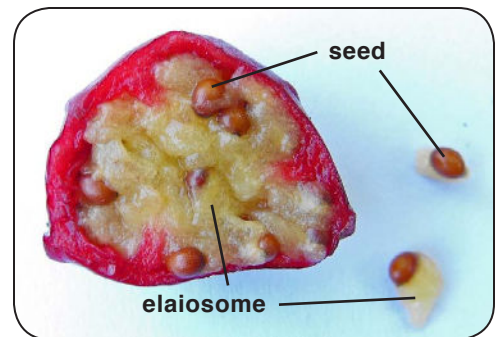
Sepal x2, and stamen



Roots, rhizome and white bud with next year's plant inside; this year's stem to the right



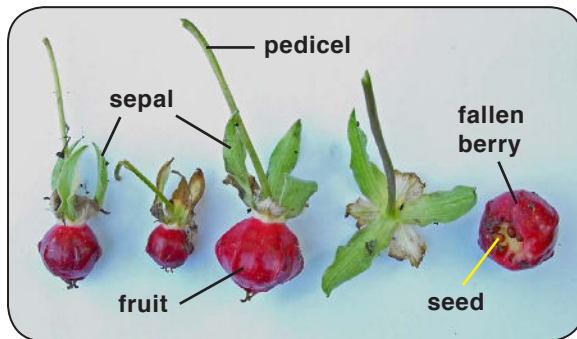
Sepals after fruit falls



Open 22 mm wide fruit; brown seeds and yellowish fleshy elaiosomes fill the berry



Seeds remain on ground after berry has gone away



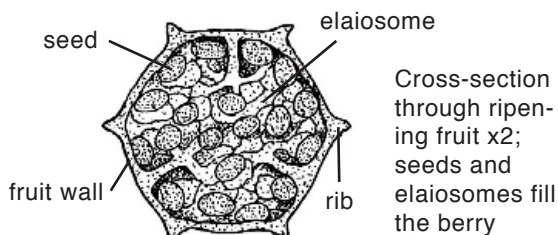
Fruit sizes; berry on right with basal hole and seeds visible has fallen from sepals to the left



A cluster of young 3-leaved plants



Shiny red fallen fruit (berry) beside margin of leaf



Cross-section through ripening fruit x2; seeds and elaiosomes fill the berry

