**Smooth Brome** *Bromus inermis*

Poaceae—Grass family

by Tom Reaume © 2011 Nature Manitoba

A perennial grass 20–150 cm tall, usually in loose clumps and spreading by underground rhizomes 2–12 cm long by 2–4 mm wide; in subalpine meadows, open woods, prairies, pastures, cities, roadsides, railways and bottomlands.

- **FLOWERS** green to purplish, blooming May–October; inflorescence a panicle, one per stem, terminal, ascending, open, 9–28 cm long by 5–24 cm wide at anthesis; main branches 2–8 per node of panicle, spreading to ascending, 0.3–15 cm long, reduced above, the longer branches often rebranching; pedicels usually 2–40 mm long by c. 0.3 mm wide, green, round, with short ascending white hairs on all sides; spikelets 4- to 13-flowered, each 14–38 mm long by 2–5 mm wide (closed), to c. 1.3 cm wide when the florets are open and the lemmas ascending, 11–126 per panicle, 1–12 per branch, the number of spikelets per rachis node decreases above, florets of top spikelets often with a sterile lemma c. 5 mm long, palea absent or reduced, stamens vestigial; rachilla green, convex and hairy on outside, internodal lengths up to c. 3.5 mm; glumes 2, unequal; 1st glume 4–9 mm long by 1–1.5 mm wide, 1-nerved, the midnerve slightly hairy, awnless; 2nd glume 6–10 mm long by 1.7–2.3 mm wide, 3-nerved, all nerves ciliate; lemmas 7–15 mm long by c. 3 mm wide (flat), 3- to 9-nerved, hairy dorsally along the midnerve and upper body, the apical awn 1–5 mm long, attached c. 0.5 mm below the hyaline bidentate tip on the back (dorsal side) of the lemma's body, or awnless; paleae body 7–10 mm long by 1–1.2 mm wide, hyaline with 2 dark green nerves, both minutely hairy, the 2 marginal wide folds along the nerves face the lemma's interior and fit tightly inside it; pistil 4.5–5.3 mm wide by c. 2.5 mm tall; lodicules are paired membranous scales 0.7–0.9 mm long by c. 0.4 mm wide which cover the base of the ovary and bases of the filaments; stigmas 2, each plume 2–2.5 mm long by 1.5–1.8 mm wide, spreading, exserted; stamens 3; filaments 4–5 mm long by c. 0.1 mm wide, attached to a short basal stalk below ovary; anthers 4–7 mm long by c. 0.6 mm wide, bright yellow, exserted and hanging below the spikelets, attached c. 0.7 mm above their bases to the filaments.

- **FRUIT** a grain, 1-seeded, dark brown, slightly shiny at the apex, 6.5–8.2 mm long by 1.4–1.9 mm wide by 0.5–0.8 mm thick, margins rounded, with a ridge on the side facing the lemma, fruit walls c. 0.1 mm thick; seed filling the grain.

- **LEAVES** ascending, appear alternate, 6–9 per stem, flat, arched, ending well below the base of the inflorescence; blades 5–38 cm long by 3–16 mm wide, scabrous along the edges and below, glabrous above; ligules 1–3 mm long, membranous, the tip blunt and ragged; auricles absent or inconspicuous; sheaths glabrous.

- **STEM** a culm, erect to nodding above, round, hollow, glabrous, 2–5 mm wide at the brown base; nodes glabrous or hairy, 2–5 mm wide, some with a black band.

- **RANGE:** (CAN) 13 provinces; (USA) 48 states; naturalized.

Clump of Smooth Brome, a week before blooming, in an alley in Winnipeg, Manitoba

Inflorescence in bloom with 7 nodes, spikelets with white stigmas and yellow anthers

Spikelet 22 mm long; lower florets open

Pistil x10, dorsal (lemma) side; 4.7 mm wide

Spikelet with white stigmas exserted
Collar junction of leaf blade and sheath, dorsal (outer) side

Collar with open sheath, ventral or inner side

Ventral side of collar showing membranous ligule that was wrapped around the stem

5 branches from lowest node of inflorescence of Smooth Brome

A 14 cm long lower branch with 12 spikelets in Winnipeg, Manitoba

Node with dark band 2 mm high

Awned lemma x6, 7-nerved

Stamen x8

filament

anther

hyaline margin

awn

pedicel

floral branch

midnerve

1st glume x8, 1-nerved

2nd glume x8, 3-nerved

blade

collar

sheath

blade

collar

sheath

ligule

stamens

filament

node

stem

blade

collar

sheath

blade

collar

sheath

ligule

stamens

filament

node

stem
Old inflorescence in early fall; tan empty spikelets blown to one side of rachis

Fruit (a 1-seeded grain) x6, palea (P) side concave, lemma (L) side ridged

Pistil x10, ventral view

Palea and pistil x10, ventral view

The underground Smooth Brome

Lower plant with rhizome and roots

Leaf x3

The underground Smooth Brome

Old inflorescence with a more symmetrical shape

P L

Spikelet x5, some stigmas exserted in Winnipeg, Manitoba

Pedicel

1st glume

2nd glume

rachilla

Stigma

 lemma of 1st floret

short awn

palea

Pedicel

Spikelet x5, some stigmas exserted in Winnipeg, Manitoba

Pistil x10, ventral view

Palea and pistil x10, ventral view

P L

Stigma

palea, margins folded in

Pedicel

Stigma