

Maximilian's Sunflower *Helianthus maximiliani*

Asteraceae—Aster family

by Tom Reaume © 2011 Nature Manitoba

A perennial wildflower 0.5–2.8 m tall by 20 (8–36) cm wide, often in colonies; **rhizomes** 5–10 cm long by 3–10 mm wide; **roots** 1–15 cm long by c. 1 mm wide; in moist to dry prairies, open areas, along roadsides, railways, streams, in thickets and sandy places.

● **FLOWER HEADS** yellow, blooming July–October; **inflorescence** a raceme of 1–50 flower heads, some slightly nodding, the terminal one blooming first; **floral branches** 4 (0–7) per stem, 14 (3.5–28) cm long, ascending, leafy, some rebranching with additional flower heads; **peduncles** often leafy, very hairy, 13 (3.5–28) cm long, some with a short green bract 1–2 cm long within 1 cm of the flower head; **flower heads** 4.8 (3–7.3) cm wide by 3 (1.7–4.2) cm tall, usually 2 (1–5) open per branch; **disc** 9–25 mm wide by 7–12 mm tall; **involucre** 1.4–3.6 cm wide by 6–15 mm tall; **involucral bracts** 27–61, imbricate, in 3 or 4 series, bent, tips ascending, light green, darker toward the inside, 10–16 mm long by 1.8–3 mm wide by c. 0.6 mm thick, some with hyaline margins, thickest near the base, convex on the outside surface, with appressed white hairs; **ray florets** 10–25 (–64), sterile, total length 2.1–4 cm; **ovary** white, 2.5–3 mm long by c. 1 mm wide, triangular; **chaffy bracts** to the outside, dark brown, pointed, hairy on the outside c. 6 mm long by c. 1.5 mm wide, flat; **pappus** absent or reduced to 2 clear light gray awns 1–2.2 mm long by c. 0.6 mm wide and entire; **corolla tube** c. 1.5 mm long, pale yellow; **ligules** 1.3–3.7 cm long by 4.3–10 mm wide, ascending to spreading, some imbricate, some with margins turned down, white hairs below (dorsal side) especially along the long raised veins, apices sometimes slightly twisted, apical teeth often 2, uneven in size, 0.5–1.2 mm long; **disc florets** perfect, 60–120 per head, 7.5–9 mm long (base of ovary to tip of corolla teeth); **ovary** white, 2.5–3.2 mm long, glabrous, flattened; **chaffy bracts** 6–7 mm long by c. 1 mm wide across one side, 6.5–8.3 mm long in fruit, stiff, V-shaped, 4- to 6-nerved on each side of the midnerve, whitish green, hyaline margins thin, apices hairy, pointed, curved to the side, dark brown in fruit; **pappus** of 2 hyaline awns 2–3.4 mm long by c. 0.6 mm wide (flat); **corolla tube** pale yellow, 0.8–1.2 mm long, hairless; **corolla limb** 4–4.5 mm long, yellow, slightly hairy; **teeth** usually 4 (5), ascending, yellow, 1–1.3 mm long; **anthers** 5, dark blackish brown, together c. 3.3 mm long by c. 0.7 mm wide, united, apices yellow; **filaments** not united, pale yellow, 2.5–4.2 mm long; **style** 2-parted, yellow, hairy, tips curled and c. 2 mm long; **receptacle** c. 5 mm wide by c. 2 mm tall, convex, rough; **fruiting heads** erect, 2–3 cm wide by 1.5–2 cm tall; **flower to fruit** 8–10 weeks.

● **FRUIT** an achene, 1-seeded, dark gray to brown, 2.8–4 mm long by 1.2–1.5 mm wide by c. 0.8 mm thick, 2 side ribs, slightly shiny, striated except at apex, indented at tapered base; **pappus** of 2 thin whitish awns 2.2–3.8 mm long by 0.5–0.7 mm wide (flat), sometimes short awns between the main pair.

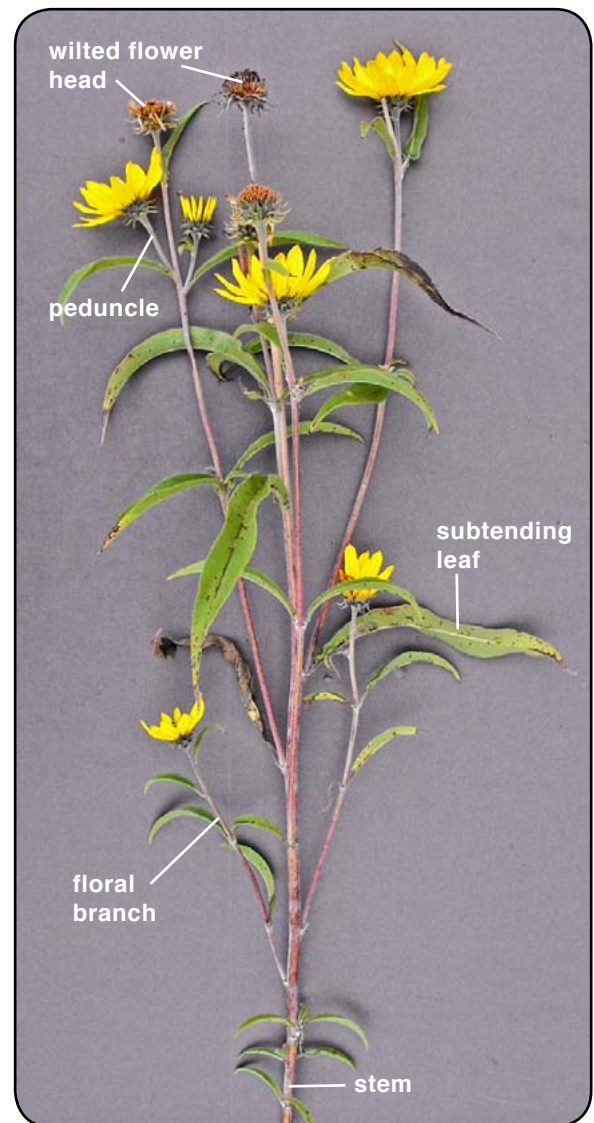
● **LEAVES** alternate above to opposite lower on the stem or opposite to subopposite along the leafy floral branches, simple, entire to slightly toothed, teeth 3–11 mm apart, grayish green, stiff, scabrous on both sides, especially along the margins, hairs appressed and ascending, falling early from the lower half of the stem; **blades** arched, usually partially folded up along the midrib, 1-nerved, 3.6–28 cm long by 0.6–5 cm wide, leaves subtending branches the largest, reduced above, lower leaves withered by anthesis; **petioles** 1–20 mm long, not clasping.

● **STEM** round, stiff, erect, solid, reddish green, scabrous above from appressed hairs, simple or branched above, 2–12 mm thick near the naked smooth base in the fall.

● **RANGE:** (CAN) 6 provinces; (USA) 38 states; a native.



A group of Maximilian's Sunflowers along a slope by Omand's Creek in Winnipeg, Manitoba



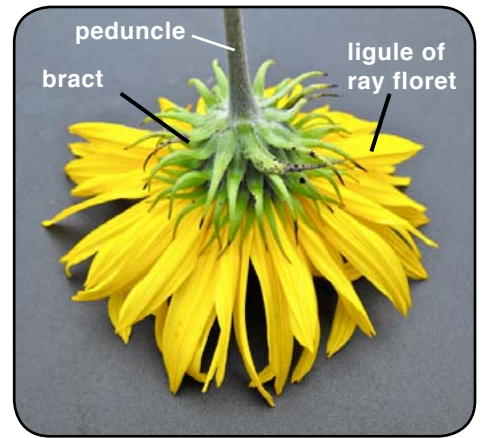
Inflorescence c. 23 cm wide with 6 flower heads open(ing) on alternate floral branches



Flower head 5 cm wide of Maximilian's Sunflower, front view



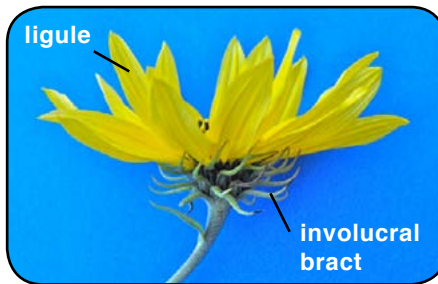
Visitor at flower head



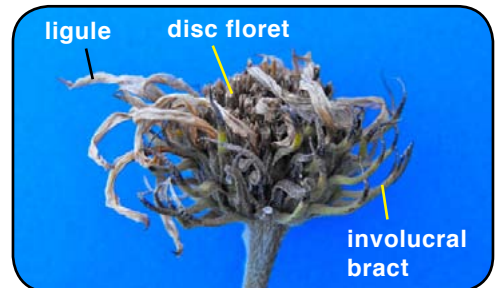
Flower head 5.8 cm wide with 48 ray florets; below/side view



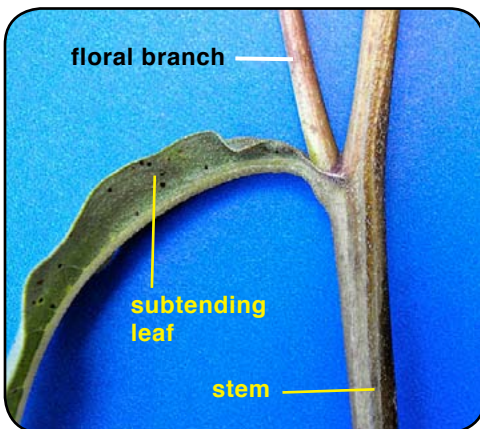
Flower head 2 cm wide, front view, 122 disc florets, 14 ray florets emerging in Winnipeg, Manitoba



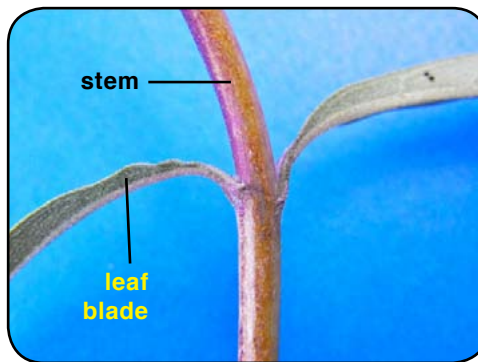
Flower head 5.5 cm wide, side view



Flower head post blooming c. 3 cm wide; some tan ligules remain



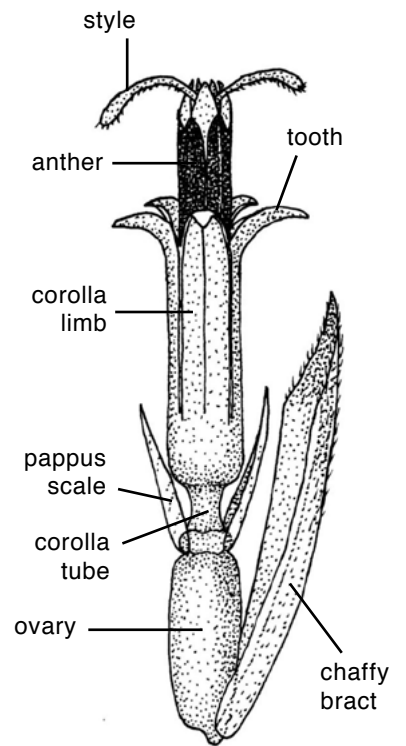
Large leaf subtending a floral branch 4 mm wide



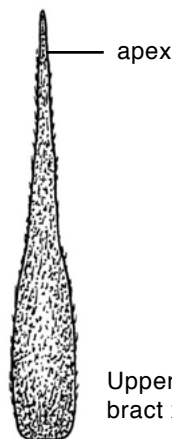
Opposite leaves along 5 mm wide stem



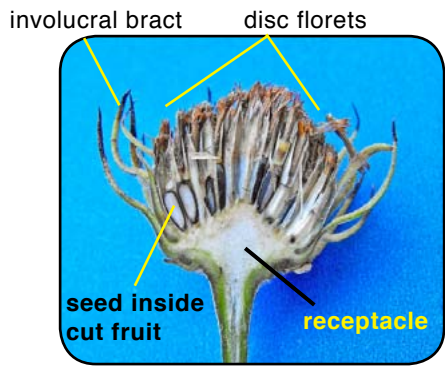
Three stem leaves, the longest is 17 cm; V ventral; D dorsal side



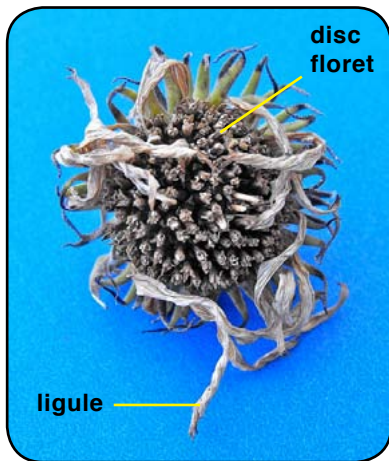
Disc floret x10



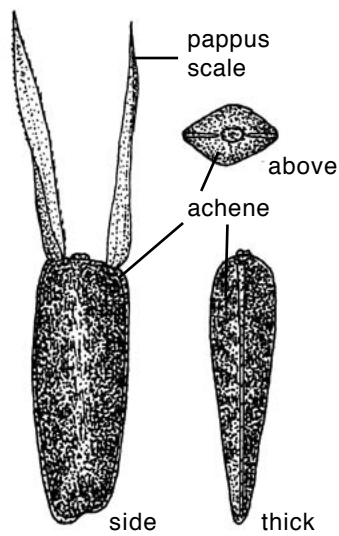
Upper, inner involucre bract x4, dorsal side



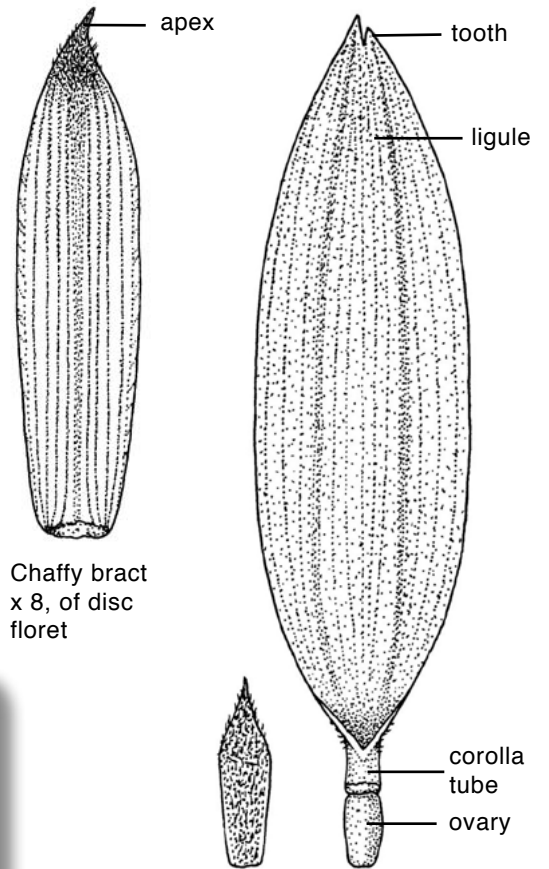
Cross-section through head 15 mm wide with ripening fruit; receptacle raised in center



Flower head 3.2 cm wide, after blooming with wilted ligules



Fruit x10

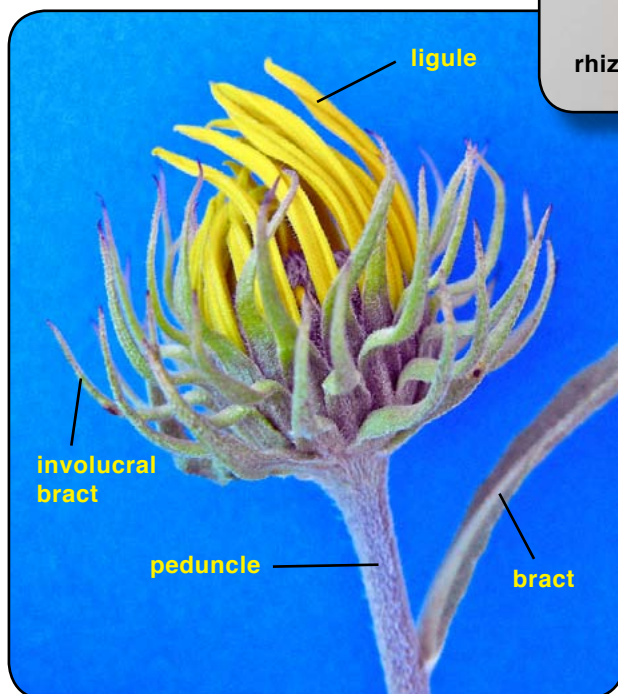


Chaffy bract x 8, of disc floret

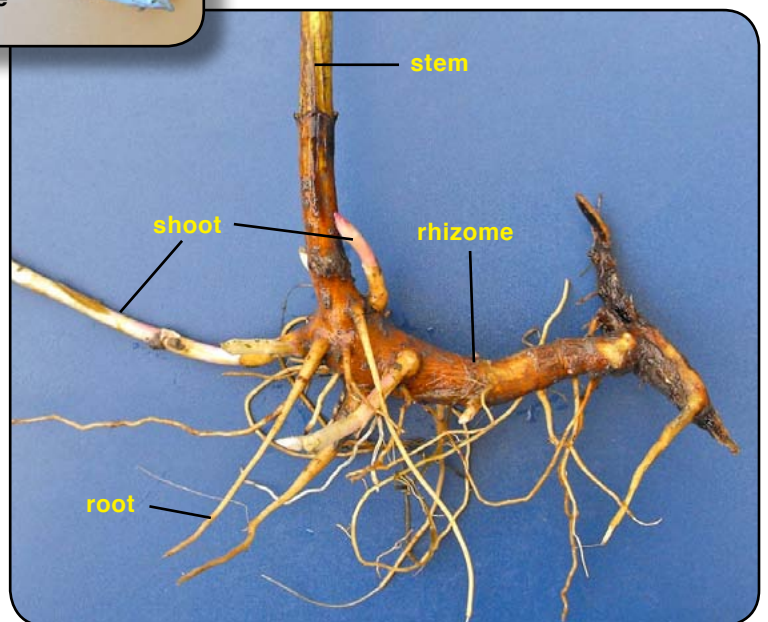
Chaffy bract (left) of ligulate (ray) floret x4



Young plant 10 cm tall from rhizome 3-4 mm thick in Winnipeg, Manitoba



Flower head 2.5 cm wide starting to open



Roots from rhizome below the 6 mm wide stem of Maximilian's Sunflower