

Vascular Plants of Williamson County

Euphorbia marginata – SNOW-ON-THE-MOUNTAIN [Euphorbiaceae]

Euphorbia marginata Pursh, SNOW-ON-THE-MOUNTAIN. Annual, taprooted, not rosetted, 1-stemmed at base, principal axis erect to suberect, at or above midplant forked usually forming a set of 3 spreading, subequal primary branches, the primary branches to 220 mm long and usually 3-forked at top producing secondary branches and those potentially successive forks, branches decreasing upward, ca. 3-forked at top with terminal inflorescences on each shoot, in range 50–140+ cm tall; monoecious; shoots with only ascending cauline leaves, the leaves overlapping 2–3 nodes, axes light yellow-green and foliage bluish and glaucous, the uppermost leaves and bracts bicolored with blade trimmed with conspicuous white margin, leaves and young stems ± villous with white hairs to 3 mm long; latex white, copious. **Stems:** cylindric, to 15 mm diameter, tough, leaf scars horizontal and notched at midpoint, pale tannish brown and 3-veined, initially with dense hairs above scars and covering axil; the lowermost stem of large individuals with patches of pale tannish brown periderm. **Leaves:** helically alternate (the lowest nodes opposite and subopposite), simple, short-petiolate to sessile, with stipules; stipules 2, attached at node, triangular to conic, < 0.5 mm long, yellow-green withering and drying dark from tip-downward, concealed by villous hairs; petiole broad with sunken midvein on upper side, to 2 mm long, upper side having a tuft of villous hairs and long-ciliate on edges; blade broadly obovate to broadly elliptic, in range < 20–65 × < 12–48 mm, rounded at base, entire and densely long-ciliate on margins to 10 mm from petiole, obtuse to broadly acute with short point at tip, pinnately veined with midrib raised on upper surface and lateral veins often inconspicuous, upper surface with a beard of hairs at base of midrib, lower surface with villous hairs along midrib. **Inflorescence:** cyathium of unisexual flowers (= involucre with staminate flowers and typically 1 pistillate flower), on a flowering branch initially forming cyathia with only staminate flowers, after several weeks forming some cyathia having staminate flowers + 1 pistillate flower, thereafter forming a greater proportion of bisexual cyathia, cyathium densely packed with bractlets and highly modified staminate flowers, appearing flowerlike with (2–)3–5 nectar-producing glands at top, each gland having a radiating white, petal-like appendage, the bracts of involucre fused most of length, having the tops 1–2 mm long, green to midpoint fringed with white, fingerlike above midpoint, short-hairy on both surfaces, the glands alternate with bracts (or certain glands absent), raised, cyathium having 35–75+ staminate, stamenlike flowers produced on 5 ascending clusters, with or without 1(2) pistillate flower stalked in center, bracteate, hairy; reproductive branch ± flat-topped, to 150 mm across, when in fruit consisting of many white and green bracts and 40+ cyathium in a cymelike array continually forming new cyathia, each principal branchlet with several cyathia to 50 mm across; at the top of the vegetative shoot inflorescence typically 3-branched subtended by a pseudowhorl of 3(–5) leaflike, sessile bracts, the bract blades broadly ovate, to 25 × 18 mm, green trimmed narrowly white along entire margins; above fork with 2–3 subequal divergent branches + 1 solitary, stalked staminate cyathium in center lacking a bract, axis of branches to 15 mm long and peduncle of terminal staminate cyathium 6.5–7 mm long, densely sericeous-villous, along each principal branch having a bract subtending each branchlet and peduncle; bract subtending peduncle to cyathium leaflike with stipules, blade ovate to elliptic, 10–20 mm long, bicolored with wide white margins and green center (expanded

midstripe), upper surface glaucous, with some long, tangled hairs along lower midrib; peduncle beneath central staminate cyathium 6.5–7 mm long, of other cyathia shorter, densely hairy; initial staminate cyathium 7.5–8.5 mm across and radial having 5 glands thereafter staminate cyathia and bisexual cyathia not strictly radial with 3–5 glands with widely spreading white appendages; **involucre** bell-shaped, the large ones 5-lobed below midpoint and $\pm 3.5 \times 3.5$ mm, cyathia with 3 or 2 white appendages smaller, light yellow-green, pubescent with long, arching and somewhat tangled hairs on the outer surface and short soft-hairy on inner surface; glands subequal to unequal on each cyathium, broad-elliptic (roundish when small) dimpled along long axis, (0.7–)1–1.2 \times (0.7–)1.3–1.7 mm, pale green with cream-colored margin, glabrous on upper side and pubescent on lower surface, petal-like appendages overlapping, kidney-shaped to broadly obovate, (1.2–)2–3 \times (< 2–)4–4.5 mm, white but green where fused to gland, typically scalloped on outer margin, upper surface glabrous, lower surface with scattered arching short hairs; bractlet subtending each staminate pedicel linear 4–5 mm long, whitish, with short hairs at least above midpoint; pistillate flower a pistil on a pedicel-like stalk (gynophore), at anthesis gynophore erect and ca. 3 mm long, pale green, and short-strigose, then exserted and bending to widely spreading, eventually to 10 mm long. **Staminate flower:** reduced to 1 stamen; “filament” 3–5 mm long (pedicel + filament) including true filament 0.5–0.9 mm long defined by abscission constriction, white, in each cluster elongating successively and exserted, with 5–10 commonly exserted above cyathium, often with short hairs above midpoint; anthers conspicuously dithecal, sacs free, each sac spheric to ellipsoid, ± 0.5 mm long, light yellow-green or light greenish yellow, sparsely puberulent, longitudinally dehiscent along top; pollen pale yellow-green to yellowish. **Pistillate flower:** reduced to 1 pistil; ovary superior, 3-lobed, ca. 1 mm, densely white-hirsute hiding green surface, 3-chambered, each chamber with 1 ovule; styles 3, ascending-spreading, fleshy, ± 2 mm long, pale green at base mostly whitish, 2-branched from above midpoint, 0.5–0.8 mm long, stigmatic on upper side. **Fruit:** schizocarp (capsule), 3-seeded, conspicuously 3-lobed, 4.5–5 \times 7–7.5 mm + persistent, erect stigmas, elastically dehiscent into 3 segments, conspicuously hirsute, after dehiscent with persistent, 3-ribbed central axis; drooping on pedicel, pedicel strongly curved from top of cyathium and somewhat recurved, ca. 10 mm long, green, short-strigose with upward-pointing hairs. **Seed:** apparently not arillate (without a caruncle at attachment), ovoid roundish on top, 4.5 \times 3 mm, in fresh fruit pale yellow-green drying dark gray with light gray minute bumps (tuberculate) forming a netlike pattern, with a line on 1 face from near the top to base of seed.

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