

Vascular Plants of Williamson County

Oenothera macrocarpa subsp. *macrocarpa* – FLUTTERMILL, MISSOURI PRIMROSE
[Onagraceae]

Oenothera macrocarpa Nutt. subsp. *macrocarpa*, FLUTTERMILL, MISSOURI PRIMROSE. Perennial herb, not rosetted, several-stemmed at base, spreading to ascending, in range to 35 cm tall; shoots with only cauline leaves, short-strigose. **Stems:** cylindrical, purple-red, short-strigose with upward-pointing hairs. **Leaves:** helically alternate, simple, petiolate, without stipules; petiole indistinct from blade, hemicylindric lacking green wings, to 6 mm long, pale green, densely short-strigose with upward-pointing hairs; blade narrowly elliptic or elliptic to narrowly lanceolate or linear-lanceolate, in range $< 50\text{--}115 \times (3\text{--})7\text{--}18$ mm, long-tapered at base, entire to subentire or inconspicuously short-dentate on margins, acute at tip, pinnately veined with midrib raised but especially on lower surface, bright green and sparsely short-strigose. Inflorescence: leafy raceme, terminal, of helically alternate, axillary flowers, having 1 flower open per day in an ascending order along the rachis, short-strigose like shoot; pedicel stout, to $4 \times 2.5\text{--}2.8$ mm, bending to orient flower upward, densely short-strigose with upward-pointing hairs. **Flower:** bisexual, radial, 70–82 mm across, lightly scented; hypanthium above ovary, forming a long floral tube, tube cylindrical, 60–133 mm long, 3–3.5 mm most of length and somewhat flared at orifice, whitish to pinkish aging darker when wilted, 8-stripped (pale strawberry) along most of length, flared to 5 mm wide at top, **nectary** at base of hypanthium surrounding style base, thickening 4+ mm long (hypanthium 4 mm wide), green, producing copious thin nectar; **sepals** 4, in bud erect and narrowly lanceoloid (not 4-sided), light yellow-green, at flower opening remaining partially fused as a unit when they split from pressure of expanding petals along 1 suture line base to tip 4, the unit at anthesis reflexed (inside out), having 4 sepals splitting upward but still fused above midpoint 15–20 from tip but free 2.5–4 mm at tips, greenish but red-purple and short-strigose at tips, exposed (inner) surface glabrous, back (outer) surface densely short-strigose; **petals** 4, twisted in bud, at pollination widely spreading, broadly obovate, $43\text{--}53 \times 45\text{--}64$ mm, light yellow but greenish at thickened base and along principal veins on lower surface, folded along midline, irregularly low-toothed on out margin often having an acute tooth to 2 mm long at end of fold (sometimes in shallow notch), with veins radiating from base, glabrous, withering during midday and aging reddish to red-orange; **stamens** 8 in 1 whorl, free, arising from rim of hypanthium; filaments long-exserted, cylindrical, ca. 20 mm long, yellow, short-tapered to point at top, glabrous; anthers versatile, dithecal, 13.5–14 mm long, pale light yellow, longitudinally dehiscent (before petals spreading); pollen pale yellow, copious, pollen grains triangular (permanently united tetrads), connected with minute threads (viscin threads); **pistil** 1, exserted above anthers; ovary inferior, strongly 4-winged and obovate to broadly elliptic in outline, $13\text{--}21 \times 4.5\text{--}8$ mm, green, densely short-strigose, 4-chambered, each chamber with many ovules; style cylindrical, ca. 50 mm > hypanthium + stigmatic lobes, 0.35 mm diameter at base and white with hypanthium, 0.7 mm diameter exserted and light yellow to light yellow-green (above stamens); lobes 4, initially erect at pollination becoming widely spreading, fingerlike, 4×0.7 mm, yellow-green, wet, papillate. **Fruit:** capsule, loculicidal, dehiscent by 4 valves along each wing splitting lengthwise top downward ca. 1/4 length (seeds exiting through top opening as fruit dispersed by wind), many-seeded, strongly 4-winged, $45\text{--}65 \times 35\text{--}50$ mm, tannish, wings 90° apart and \perp to fruit axis, to 22

mm wide, tough, papery; pedicel persistent on bottom, fused portion of fruit. **Seed:** irregularly obovoid with 2 wings from midpoint, overall 4–5 mm long, seed body 3.5–4 × 1.6–2.1 mm, brown, coarsely wrinkled and somewhat corky, wings papery, ca. 1 mm wide, brown, toothed.

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