

Phyla lanceolata (Michx.) Greene, LANCELEAF FROG FRUIT, LANCELEAF LIPPIA. Perennial herb, clonal, rhizomatous, fibrous-rooted, with trailing stems rooting at buried nodes, prostrate to decumbent-ascending, 15–80 cm tall; shoots with appressed 2-armed (T-shaped) hairs, glandular hairs absent, not aromatic; rhizomes slender, typically purplish along axis, with nongreen, ovate to obovate scales < 3 mm long. **Stems:** ± 4-sided with rounded edges, < 6 mm diameter, tough, flexible, internodes 20–145 mm long, with a support structure (fiber bundle) along each edge and 1–3 fiber bundles on each face (commonly 1 pair of opposing faces with only 1 fiber bundle per face, the other pair of opposing faces with 2 or 3 bundles per face); hollow. **Leaves:** opposite decussate, simple, short-petiolate with pairs connected by low ledges across node, without stipules; petiole channeled with narrowly winged margins, < 6.5 mm long but mostly shorter and indistinct from blade, appressed-hairy but glabrous on upper side; blade narrowly ovate to lanceolate, 20–82 × 10–45 mm (the first green leaves from rhizome often much smaller), bright green, tapered to long-tapered at base, serrate on margins with (5–)6–10 teeth per side from below midblade to tip, acute at tip, pinnately veined with principal veins raised on lower surface, appressed-hairy, the 2-armed hairs in tiny depressions. **Inflorescence:** headlike spike, axillary on long peduncle, 1 per node alternating side to side at successive nodes or paired at nodes on vigorous shoots, many-flowered, initially spheroid becoming cylindrical to truncate-ovoid, 5–14 × 5.5–7 mm, flowers aligned in 10–13 vertical rows and tightly whorled, each whorl with 5–7 flowers, densely bracteate; peduncle ascending, ± cylindrical, to 2 mm basal diameter but flaring just below spike and becoming rectangular in ×-section, 40–110 mm long, tough, hollow, appressed-hairy with arms of hairs vertically aligned; bractlets overlapping, with basal set in whorls of 5, appressed, ± rhombic to ± inversely trowel-shaped, 2.5–3.5 × 2–2.5 mm, long-tapered at base, acute to abruptly acuminate at tip, becoming cupped over fruit, greenish at base and purple or purplish lavender above midpoint and exposed membranous margins, with midvein, appressed-hairy on exposed surface with arms of hairs spreading parallel with long axis of bractlet. **Flower:** bisexual, bilateral, mostly concealed by bractlet with only corolla lobes exposed, ca. 1.5 mm across; **calyx** 2-lipped, strongly compressed front-to-back with lips lateral, 1.5–2 mm long, somewhat keeled, mostly pale green with lavender on lip tips, having hairs mostly along keeled edge; tube without ribs or conspicuous veins; lips acute, > 1/2 calyx, the split between lips deeper on the outer than inner side; **corolla** 2-lipped, 4(–5)-lobed, 3–3.5 mm long, white turning lavender after pollination, persistent; tube narrowly funnel-shaped, ca. 1.5 mm long, mostly glabrous but internally with short, unbranched hairs among and below the lowest stamens, throat ca. 1 mm long, with a yellow spot adjacent to upper stamens; lips spreading, unequal; upper lip ca. 0.7 mm long and wide, often shallowly notched (rarely 2-lobed); lower lip 3-lobed, underneath appressed-hairy at base, central lobe transversely elongated, ca. 0.6 × 1.2 mm; lateral lobes rounded, ca. 0.6 mm long; **stamens** 4, all fertile, pairs fused at 2 levels, 2 stamens arising in middle of corolla tube and 2 stamens arising on upper corolla tube, included, subsessile; filaments ≤ anther length; anthers basifixed, dithecal, 0.3 mm long, yellow with connective tinged pinkish, longitudinally dehiscent; pollen light yellow; **pistil** 1, bottle-shaped, ± 1.2 mm long; ovary superior, ovoid, ca. 0.5 mm long, not lobed, ± translucent, yellow green, or pale green, glabrous, 2-chambered, each chamber with 1 ovule; style ± 2-lobed; stigmas capitate, oblique, wider than style. **Fruit:** schizocarp, of 2 1-seeded nutlets (mericarps), <

persistent calyx, \pm ellipsoid to obovoid and somewhat compressed front-to-back (\perp suture), $1.2\text{--}1.6 \times 1.2\text{--}1.4 \times 0.8\text{--}1.1$ mm, indented at base (appearing flat in side view), splitting \perp to wide face to yield mericarps; mericarps hemi-ellipsoid to hemi-ovoid, tannish, paler on flat face, with \pm cartilaginous rim on margin of flat inner face. Early July–mid-September.

Native. An uncommon perennial herb restricted to lake margins and edges of creek bed, known from only a few sites in SMM. This species is more robust than its cousin *Phyla nodiflora*, which has small leaves and fewer teeth on the blade margins. Flowers of *P. lanceolata* have smaller corolla lips, but this species appears to be self-compatible because every fruit develops on a spike.

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