

Vascular Plants of Williamson County
Nekemias arborea – PEPPER-VINE [Vitaceae]

Nekemias arborea (L.) J. Wen & Boggan (syn. *Ampelopsis arborea*), PEPPER-VINE. Woody climber (liana), winter-deciduous, with inflorescence tendrils, climbing, trailing, and attaching to surrounding plants or itself; shoots with only cauline leaves, sparsely pubescent (sometimes appearing \pm glabrous); tendril (inflorescence) opposite leaf base, on vegetative shoots at 2 successive nodes and absent from third node or present on consecutive nodes, becoming an inflorescence by forming flower buds on new forks, the first fork 40–85 mm from base, terminal axes subequal and often nearly as long as the lowest internodes, not striped, bract at first fork appressed and scalelike with prominent, green midvein and membranous margins, 1.5–2.2 mm long, short-ciliate on margins, upper portion often with unequal fork with 1 dominant and other weakly developed, with shorter bract at fork. **Stems:** strongly ridged aging \pm cylindric, with 5 ridges descending from each leaf, tough, internodes to 80 mm long, nodal ledges beneath stipules absent; old stems woody, with light brown, tight bark having vertical (axial), shallow lines of dark brown inner bark to 15 mm long. **Leaves:** helically alternate, 2(–3)-odd-pinnately compound with lateral primary and secondary leaflets always paired, opposite, and approximately \perp rachis or rachilla, petiolate, with stipules; stipules 2, attached to stem and petiole base, triangular to narrowly triangular, 3.5–6 mm long with broad, crescent-shaped base, soon aging papery and reddish, ciliate on margins, deciduous; petiole channeled with 2 erect ridges, < 25 mm long, at least ridges purplish red, sparsely shaggy-pubescent; blade deltate to triangular in outline, mostly 120–170 mm long and wide, of 1–5 pairs of primary lateral leaflets, lateral primary leaflets to 70 mm long, equal and \pm mirror images in each pair, decreasing upward, having 2-ridged petiolule to 15 mm long, the basal 1–2 pairs usually with secondary leaflets having 2-ridged secondary petiolule and sometimes third-order leaflets (secondary leaflet pinnately 3-foliolate), upper pairs mostly = simple leaflets, terminal leaflet simple and stalked at end of rachis; blades of ultimate leaflets coarsely serrate or lobed, ovate to rhombic or elliptic to obovate, mostly to 50(–65) \times 35 mm, each often asymmetric except terminal leaflet, tapered at base, teeth mostly above midblade, acute at tip, pinnately veined with veins raised on lower surface, upper surface aging somewhat glossy dark green and glabrescent with principal veins slightly raised and minor veins slightly sunken, having short hairs persistent along furrows of midrib, lower surface lighter green, pubescent along veins and with whitish, deltate shelters (domatia) at junctions of midrib with lateral veins. **Inflorescence:** panicle with cymelike branchlets, = a modified tendril opposite leaf at node, at anthesis mostly < 80 mm long increasing 2 \times in fruit, many-flowered, with bisexual flowers, bracteate, puberulent or lower axes aging glabrescent; bract subtending peduncle appressed, awl-shaped, to 1.5 mm long; peduncle at anthesis mostly < 15 mm long increasing to 70 mm in fruit or also where peduncle forms a coiled tendril below first branch, with conspicuous, purple-red pulvinus at base to 5 mm long, axis 2-forked several times to form lateral branches, lateral branches cylindric, 2-forked several times with branchlets = terminal cymes, bract subtending each branch or branchlet appressed, awl-shaped, < 1 mm long, each branch or branchlet axis with pulvinus at base; cyme branchlet to 15 mm long with short internodes and often 10+ flowers and appearing knobby with scars when old flowers abscise, puberulent; bractlet subtending

pedicel ovate to semicircular, < 1 mm long, acute to obtuse and fringed on margins, somewhat fleshy below midpoint and turning papery above midpoint; pedicel \pm cylindric, at anthesis to $2.5 \times 0.4\text{--}0.5$ mm increasing slightly in length in fruit but aging 1.5 mm thick beneath fruit, pimply with developing lenticels, conspicuously puberulent aging glabrescent. **Flower:** bisexual, radial, \pm 5 mm across; **calyx** 5-lobed, lobes shallow and broad, mostly yellow-green; tube appressed to base of flower, broadly cup-shaped, ca. 1×2 mm, puberulent; lobes $0.2\text{--}0.25 \times 0.8\text{--}1$ mm, pale on margin; **petals** 5, \pm thick and spreading, arching, acute and ovate trowel-shaped, ca. 2.2×1.2 mm, narrowly attached at base and easily dislodged, upper surface pale green, essentially glabrous but sparsely puberulent and with whitish, infolded margins above midpoint, lower surface puberulent; **stamens** 5, free, opposite petals; filaments ascending curving inward, \pm 1.5 mm long, pale green, tapered to anther; anthers dorsifixed (versatile), dithecal, \pm 0.5 mm long, light yellow, longitudinally and inwardly dehiscent; pollen light yellow; **nectary disc** adherent to above midpoint of ovary, conspicuously 5-lobed, swollen and thick having lobes alternate with stamens and a rim slightly elevated to collect nectar on top of ovary, ca. 2 mm diameter, filaments at sinuses; producing copious nectar; **pistil** 1, 1 mm long; ovary superior but appearing half-inferior covered by adherent nectary disc, exposed portion conic and yellow-green with stout, whitish style aging greenish, glabrous, 2-chambered, each chamber with 2 ovules; stigma terminal, truncate, orangish. **Fruit:** berry, 2–4-seeded, oblate spheroid to spheric, in range $8\text{--}9 \times 8.5\text{--}10.5$ mm, immature fruit greenish white with scattered reddish spots aging glossy black, not glaucous; pulp juicy, white. **Seed:** ovoid and 3-sided (3-seeded or 4-seeded), hemi-ovoid (1-seeded or 2-seeded) or ovoid (1-seeded), $4\text{--}4.3 \times 3.7\text{--}4$ mm, brown, 2 faces \pm flat, back rounded with raised scar.

A. C. Gibson