

Vascular Plants of Williamson County

Passiflora lutea var. *glabriflora* – YELLOW PASSIONFLOWER [Passifloraceae]

Passiflora lutea L. var. *glabriflora* Fern., YELLOW PASSIONFLOWER. Perennial climber, herbaceous or having woody lower stems, with tendrils, several–many-stemmed at base, having long branches to 400 cm long, trailing, growing over shrubs; shoots with long internodes and widely spaced leaves, lacking extrafloral nectaries, soft short-hairy with curved to arching hairs, not glaucous; tendril (stem tendril) 1 per node, axillary and neighboring pedicel below a vegetative bud (= accessory bud, a future branch), cylindric and unbranched, 100–140+ mm long (straightened), typically forming to 30 tight coils around support, glabrate with sparse hairs only near base. **Stems:** conspicuously 5-ridged and 5-sided + minor ridges, typical stems to 3 mm diameter, with 3 principal ridges descending from each leaf (petiole + 2 stipules), tough, with internodes < 30–150 mm long. **Leaves:** helically alternate, deeply palmately lobed with 3 distinct lobes and lacking sublobes, petiolate with pulvinus, with stipules; stipules 2, attached to node adjacent to base of petiole, linear (narrowly triangular), 3–3.5 × 0.3–0.35 mm, 1-veined, sparsely short-hairy; petiole pulvinus indistinct from petiole axis, axis cylindric, to 42 mm long, lacking stalked extrafloral nectaries, initially glaucous, with hairs arching upward; blade < 35–90 × < 50–135 mm, length < width, sinuses to midpoint from attachment at base and broadly rounded, lobes rounded to obtuse triangular (deltate) to semicircular, center lobe > lateral lobes, length ≤ width, in bud strongly folded upward along midrib, truncate (subcordate) at base with cupped lip above petiole, entire on lobe margins, palmately veined at base with 3 principal veins and pinnately veined above, with principal and lateral veins raised on lower surface, upper surface glabrescent, lower surface sparsely short-hairy, not glaucous. **Inflorescence:** flowers 2 at node, axillary and arising beside tendril, lacking bracts; when 2 flowers at a node 1 flower often abscising early in bud; pedicel with pulvinus at base, 20–34 mm long, green, jointed (abscission zone) ca. 3 mm from top and bent at joint = horizontal flower, sparsely short-hairy to glabrous. **Flower:** bisexual, radial, ca. 24 mm across; hypanthium saucer-shaped, indented around pedicel, thick-walled, internally with a greenish and white, thick, recurved lip protruding as nectar chamber; **nectar chamber** ringlike, with purple and white, defined above by flaring rim on the inside (limen) arising from the staminal column and a comblike barrier on the outer side arising from hypanthium (operculum), flaring rim ca. 1.5 mm long, grading to purple on column, the comblike barrier of ca. 35 elements fused and accordionlike leaning toward center, 1.5–1.8 mm long, purple to midpoint and greenish white above midpoint, fringed on margin, covering greenish trough with purple spots; hypanthium slightly extending beyond the comblike barrier; **calyx** 5-lobed, arising from hypanthium rim, fused at base < 1 mm, light green; lobes widespread, overlapping, triangular but not hooded, 10–12 mm long, 3-ridged, sparsely short-hairy on outer (lower) surface; **corolla** arising on hypanthium surface, of 5 petals and 2 rings of many filaments (outer and inner corona); petals widely spreading, oblong-lanceolate, ca. 5.5 × 1.2 mm, greenish with colorless margins and tip and 1-veined; often minutely jagged at tip; outer corona filaments ca. 35, widespread above petals, cylindric and wormlike, 4.5–7 mm long, light whitish green, wavy; inner corona filaments ca. 35, erect, narrowly club-shaped, ca. 2 mm long, purple to midpoint and pure white at tips; **stamens** 5, arising on central column fused to stalk

beneath pistil (androgynophore) and forming inner wall of nectar chamber, purplish at base to pale green above, fused portion \pm 4.5 mm long; filaments spreading \perp , strap-shaped, ca. 2.5 mm; anthers exerted, versatile, dithecal, 2.7–3.3 \times 1.4–1.5 mm, light yellow aging purple, longitudinally dehiscent; pollen light orange; **pistil** 1, stalked (stipe); at anthesis stalk above staminal column short, ca. 5 mm long, pale green; ovary superior, ellipsoid, ca. 2 \times 1.2–1.3 mm, greenish light yellow, glabrous, 1-chambered with $<$ 10 ovules attached to 3 long placentae on wall; style base $<$ 0.5 mm long, base light green, conspicuously 3-forked, the branches ascending, narrowly club-shaped, at pollination ca. 4 mm long, light green at base to pale green at top, hemi-cylindric becoming flattened on inner side; stigmas terminal, above level of anthers, hemispheric, 0.8–0.9 mm diameter, light green, minutely papillate. **Fruit:** berry, pendent on pedicel + stalk (androgynophore), 6–12-seeded, spheric to subspheroid, 9.5–13 mm, deep purple and glaucous, glabrous, when green fruit wall 1 mm thick around open chamber, wall becoming purple-red fleshy with extensive colorless placental and funicular tissue, pulp most of wall, juicy tissue = arils of seeds; androgynophore \pm 5 mm long; pedicel flexible portion, 26–34 \times 0.5 mm, distinct abscission constriction from rigid portion 3 mm long. **Seed:** completely enclosed by juicy aril attached at base of seed; aril heart-shaped, to 6 \times 6 mm, colorless covered with colorless skin, watery and sweet; seed obovoid to spindle-shaped compressed side-to-side, 4.5–5 \times 3.2–3.7 \times 1.8–2 mm, glossy black with tannish thickening on 1 margin, faces with relatively coarse, sideways, low ridges and grooves.

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