

Vascular Plants of Williamson County

Neptunia pubescens var. *microcarpa* – TROPICAL NEPTUNIA [Fabaceae]

Neptunia pubescens Benth. var. *microcarpa* (Rose) Windl., TROPICAL NEPTUNIA. Perennial herb, not spinescent, taprooted, not rosetted, several-stemmed at base, procumbent and trailing over ground or low vegetation (not climbing); shoots with only compound cauline leaves, secondary leaflets folding together when touched or severed (thigmotropic), lacking extrafloral nectaries, axes with stalked glandular hairs but appearing nonglandular after losing heads, minutely red-dotted (bases of glandular hairs), secondary leaflets glaucous with nonglandular hairs. **Stems:** ridged becoming cylindric, trailing stems to 2 mm diameter, with 3 ridges descending from each leaf, tough, internodes to 65 mm long, with persistent red bases of stalked glandular hairs. **Leaves:** helically alternate, even-2-pinnately compound with 2–4 pairs of primary leaflets (pinnae) and primary leaflet with to 28 pairs of secondary leaflets, petiolate with pulvinus, with stipules; stipules 2, attached to stem directly below pulvinus, asymmetrically ovate, 6–7 × 2–2.4 mm, with free, small basal lobes, short-ciliate on margins, acuminate at tip, many-veined from base appearing parallel, surfaces veiny, upper surface with short hairs, persistent; petiole pulvinus 3–4 mm long, green and red-dotted, pubescent, above axis channeled with 2 ridges, to 28 mm long, tough, puberulent and red-dotted; stipels 2 on upper and outer side subtending pulvinus of primary leaflet, ca. 0.5 mm long, whitish; rachis to 41 mm long with primary leaflets spaced to 15 mm apart, channeled and 2-ridged, red-dotted and short glandular-hairy, with extension to 2.5 mm long beyond primary leaflets; primary leaflets < 35–67 mm long, somewhat jointed with rachis; petiolule pulvinus arising from ridge, 1.3–1.5 mm, purplish, pubescent, with secondary leaflets at top; rachilla strongly 3-sided with secondary leaflets arising from 2 upper sides, to 41 mm long with 1 mm extension, having somewhat narrow wings with colorless edges and short glandular hairs along edges; secondary petiolule pulvinus 0.25–0.3 mm long, green, glabrous; blades of secondary leaflets asymmetrically oblong, 4.6–6 × 1.2–1.4 mm but the lowest pair symmetrically elliptic and ca. 2 × 0.8 mm (1/2 other leaflets), oblique at base with tapered and truncate side, entire and short-ciliate on margins (not glandular), obtuse to rounded at tip, 3-veined from base with principal veins raised on lower surface, surfaces with waxy bloom. **Inflorescence:** spike, axillary on long peduncle > petiole, spike 20–35-flowered, subspheroid, ca. 12 mm across, flowers helically alternate, subsessile, the lower flowers (< 10) sterile with staminodes, showy, smaller in bud and all opening before fertile flowers (initially the 2 groups appearing divergent), bracteate; peduncle pulvinus 2.5–3 mm long, with glandular hairs, above pulvinus ± channeled, at anthesis to 60 mm long, tough, green and red-dotted, with 2 ridges descending from a pair of bracts above midpoint, bracts awl-shaped, 1.8–3 mm long, green and membranous, having a third bract ± subtending spike; rachis ridged, to 8 mm long, with radiating, stalked glandular hairs; bractlet subtending flower cupped-ovate with acuminate tip and somewhat keeled, ca. 1.5 × 0.7–0.75 mm, of sterile flower spreading, > calyx, and persistent after flower abscised, of fertile flower appressed to and < calyx, membranous with greenish stripe from midblade to purplish tip, short-ciliate on margins above midpoint, persistent during flowering. **Sterile flower:** radial, 3–3.5 mm across; **calyx** 5-lobed, 1.1–1.4 mm long, colorless with green stripes to lobes; tube funnel-shaped; lobes triangular, 0.5–0.6 mm long, purplish at tips,

short-ciliate on margins; **corolla** 5-lobed, 2–2.2 mm long; tube funnel-shaped, 1 mm long; lobes obovate, 1–1.2 × 0.8 mm, pale green changing to green at tip; **stamens** = 10 petaloid staminodes, oblong to spatulate, 5 × 1 mm, bright yellow aging to orange-yellow; **pistil** absent. **Bisexual flower:** ± radial, 2.5 mm across; **calyx** 5-lobed, ± 2.3 mm long; tube funnel-shaped, translucent with 5 slender, green veins; lobes triangular, ca. 0.8 mm long, with thick green vein red at tip, short-ciliate on margins; **corolla** 5-lobed, ca. 3 mm long; tube funnel-shaped, to midpoint; lobes acute-ovate, green; **stamens** 10, free; filaments ascending, ca. 5 × 0.1 mm (thicker approaching anther), light yellow aging orangish; anthers ± versatile, dithecal, 0.9–1 mm long, light yellow aging orange-yellow then red, longitudinally dehiscent; at top of anther connective with a stalked, club-shaped, white food body 0.25–0.45 mm long, some food bodies exerted from bud before anthesis; pollen orange-yellow; **pistil** 1, ± 5 mm long, short-stalked; ovary superior, ellipsoid, 1–1.2 × 0.4 mm, pale green, with several straight short hairs and minute glandular hairs at top, 1-chambered with ca. 5 ovules attached to upper side; style cylindric, curved (not crooked or straight), pale green becoming white above midpoint aging reddish, appearing truncate but having a recessed stigma at tip with minute papillae lining depression. **Fruit:** pod (legume), short-stalked, dehiscent, 2-valved, mostly 4–5-seeded, flattened oblong, 28–40 × ± 12 mm, straight to slightly curved, ± rounded at tip, bulging at seeds with veins raised over seeds; stalk ca. 1 mm long, concealed by calyx 2–2.4 mm long with 5 scarlet ridges. **Seed:** compressed-ovoid, 7.5–8 × 4.5–5 × 1.7–1.9 mm, glossy brown, smooth, having elongate U-shaped mark nearly base-to-tip on each face; hilum small and subterminal.

A. C. Gibson