

Stachys L. HEDGE NETTLE

Stachys albens A. Gray, WHITE HEDGE NETTLE. Perennial herb, rhizomatous, fibrous-rooted, 1–several-stemmed at base, forming adventitious roots at basal nodes, erect to ascending, in range 50–130 cm tall; shoots with only cauline leaves, soft-hairy, densely woolly on young growth, with whitish, short to long nonglandular hairs and short-stalked glandular hairs with colorless heads, strongly aromatic. **Stems:** 4-sided, < 12 mm diameter, green turning reddish or purple at base, densely woolly-tomentose; hollow. **Leaves:** opposite decussate, simple, petiolate with pair connected by 2 hairy, low ledges across node, without stipules; petiole channeled, 5–80 mm long, midrib white on upper and lower sides; blade broadly to narrowly ovate, 20–175 × 10–105 mm, thick, cordate to truncate at base, serrate to crenate on margins, acute to obtuse at tip, pinnately veined with 3 or 5 principal veins arising at base, principal veins sunken on upper surface and raised on lower surface, upper surface pilose-villous, lower surface tomentose to woolly-tomentose. **Inflorescence:** interrupted, terminal, spikelike arrays of condensed axillary cymes paired at nodes (verticils), array 70–200 × 13–15 mm, often with 10+ flowering nodes, lateral shoots when > 50 mm long with at least 3 flowering nodes, each cyme 3–7-flowered (6–14 flowers per node), bracteate, densely white woolly-tomentose and glandular-hairy with colorless, stalked glands; peduncle of reproductive axis to 30 mm long, stemlike; axis internodes 4-sided, to 25 mm long increasing in fruit, the basal internode the longest; bracts subtending peduncle of reproductive axis 2, leaflike; bract subtending cyme sessile (paired at node), ovate to lanceolate, at anthesis of cyme 6–7 × 2–2.5 mm increasing in fruit, green or reddish, acute (2-lobed) with short bristle at each tip, with only midrib conspicuous, tomentose and densely glandular-hairy; bractlets subtending axes of each cyme ca. 4, awl-shaped or lanceolate, typically < 1 mm long, light green to white; pedicel 0– < 0.5 mm long. **Flower:** bisexual, bilateral, 6–9 × 3.5–5 mm across; **calyx** 5-lobed, at anthesis 6.5–8.5 mm long (excluding terminal bristles) increasing somewhat in fruit, green or aging reddish on lobes, densely tomentose and glandular-hairy; tube funnel-shaped, 4–5.5 mm long, many-veined at based and 10–15-veined below lobes, internally mostly glandular-hairy but also with scattered, short, straight hairs; lobes subequal, triangular, 1.3–2.3 × 1.5–2 mm (excluding bristle), with the 2 lower lobes slightly shorter, midribs conspicuous, acute at tip and terminated with stout bristle to 1 mm long, internally pilose and glandular-hairy or sometimes upper lobes only glandular-hairy on inner surface; **corolla** ± 2-lipped, in range 10–13 mm long, white, lips often diverging 90+°, 10-veined; tube 1.5–4 mm long and with lower side ca. half as long, defined internally by an oblique collar of club-shaped hairs; throat 3.5–5 mm long, saclike at base on lower side; upper lip obovate and ± hoodlike, cupping anthers, 3–4.5 × 2.5–3.3 mm, entire at tip, white-tomentose and with scattered glandular hairs on back; lower lip 3-lobed, 4–5 × 3.5–5 mm, white with 3 purplish red lines (solid or ± dashed), terminal lobe ± heart-shaped, ca. 3 × 3 mm, constricted to ca. 1.7 mm at base, white-tomentose and with scattered glandular hairs on back, lateral lobes rounded, ca. 1.5 mm wide, typically arched downward (slightly recurved); **stamens** 4, 2 fused to upper side and 2 to lower side of corolla throat, subequal, exerted beyond throat but shorter than upper lip; filaments irregularly flattened, 3.7–6 mm long with upper pair ± 1 mm < lower pair but attached ca. 1 mm higher on corolla, white with pink, club-shaped, strongly bent at tip (especially on upper pair), upper (shorter)

filaments pilose to villous with scattered glandular hairs on lower 3/4, only glandular hairs on upper 1/4, lower (longer) filaments pilose to villous at or slightly above midpoint, glabrous above; anthers dorsifixed, conspicuously dithecal with halves divergent, 0.6–0.9 mm long, pale yellow and reddish on aperture, longitudinally and downwardly dehiscent; pollen pale yellow; **nectary** beneath and cupping base of ovary, 4-toothed, ca. 0.4 mm tall × 1.2 mm across, greenish, fleshy; **pistil** 1; ovary superior, strongly 4-lobed united only at base, lobes ovoid to ellipsoid, ± triangular in ×-section, flat on inner faces, each chamber with 1 ovule; style attached at ovary base in center of lobes, exserted, 8.7–13 mm long, white, 2-branched near tip, the branches spreading, slightly unequal, ± 0.4–0.6 mm long, smooth except minutely papillate on inner edge near tip. **Fruits:** nutlets 4, ± ovate in outline, 1.8–2 × 1.2–1.6 mm, ± triangular in ×-section, flat in inner faces, convex on outer face, dark brown to nearly black or lighter brown where exocarp separates from mesocarp, wrinkled with irregular, small, rounded ridges, thin-walled. Late May–early September.

Native. Colonial perennial herb growing mostly in and along creek beds in riparian woodland, commonly in full shade. *Stachys albens* is clearly recognized as a mint with square stems and strongly aromatic foliage, and this species is densely woolly tomentose and thereby soft when handled. White hedge nettle is easy to identify as the one local herbaceous mint with white flowers.

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