Parthenocissus inserta (A. Kern.) Fritsch, WOODBINE, THICKET CREEPER. Woody climber (liana), drought-deciduous, with tendrils, trailing and climbing over low vegetation, trailing shoots to several meters long; shoots essentially glabrous; tendril opposite leaf base, on vegetative shoots at 2 successive node and absent from third node, stemlike but sometimes later becoming an inflorescence by forming flower buds on new forks, unequally forked, in range with 2–3 forks, tips swollen but not bulbous and with glandular blisters on outer curves, the lowest internode initially  $\pm$  40 mm long elongating and becoming thickened while coiling around support, other internodes shorter, especially lower forks typically subtended within 3 mm by a stipulelike scale, the lowest scale of tendril  $2-2.5 \times 1$  mm, often 2-toothed, upper scales typically 1.2-1.5 mm long, scales abscising before tendril matures. Stems: low-ridged soon becoming cylindric and brownish red, flexible, internodes 20–110 mm long, somewhat swollen above node; lenticels fusiform and vertical, reddish brown; bark tight and light grayish brown bark. Leaves: helically alternate, 1-palmately compound with (2–)5 leaflets, long-petiolate with pulvinus, with stipules; stipules 2, fused to stem at node and scarcely to petiole, oblong to ovate,  $4-7 \times 1.5-3.3$  mm, somewhat asymmetric, margins somewhat membranous, acute to rounded at tip, drying papery and abscising before leaf fully mature leaving a linear or slightly curved red scar on stem; petiole (40-)80-200 mm long, pulvinus cylindric to cylindro-conic at base; petiolules 1.5–8 mm long, each with 2 spreading to erect wings decurrent from leaflet blade and having a raised midvein on upper side; blades of leaflets ovate or broadly lanceolate to broadly elliptic, in range  $40-130 \times 20-70$  mm, tapered at base, coarsely serrate on margins, acute to acuminate at tip, pinnately veined with principal veins raised on lower surface, turning dark crimson before abscising during summer drought, upper surface sometimes sparsely short-strigose along principal veins. Inflorescence: cyme, opposite leaf at node (as a modified tendril), many-flowered, axis several-forked forming lateral branches with an ultimate, several-flowered, hemispheric and umbel-like cluster, bracteate, glabrous; bract subtending principal branch or branchlet like scales subtending tendril forks; bract subtending minor branchlets and bractlet subtending pedicel awl-shaped, to 0.5 mm long, aging brown and abscising before anthesis; pedicel 0.7–3.5 mm long increasing in fruit. Flower: bisexual, radial, ca. 4.5 mm across; calvx sharply cup-shaped, 0.75–1 mm long, green, subentire or with 1–5 unevenly spaced, low or inconspicuous teeth; **petals** 5, free but tightly abutted forming a caplike bud cover (calyptra), at anthesis spreading and later strongly recurved at base, elliptic to oblong in outline and S-shaped in side view,  $3.8-4.3 \times 1.4-2.3$  mm, green, thick, with infolded margins, hooded with short inward-facing margins (in bud) becoming outward when open with a downward-oriented hook 0.4 mm long continuous with infolded margins; stamens 5, free, opposite petals and in bud each held in place by hood of petal, at anthesis ascending to erect, often falling with petal; filaments 1.5–2.6 mm long, pale yellow-whitish; anthers dorsifixed, dithecal, narrowly triangular, 1.3–2.1 mm long, light yellow to yellow, rounded at tip, connective thickish, longitudinally dehiscent; pollen light vellow; **pistil** 1, 2–2.8 mm long; ovary superior, ovoid and weakly 5–6-faced, vellowgreen becoming reddish at base, tapering acuminately into style, 2-chambered, each chamber with 2 ovules attached at base of central (intruded) placentae; style indistinguishable from ovary, thick conic; stigma terminal, sometimes depressed at top, pale yellow-green, minutely papillate. Fruit: berry, 1-4-seeded, in range  $\pm$  spheric, 6-8

mm, purple; skin (exocarp) clinging to pulp; pulp thin, juicy, colorless; inflorescence axes strawberry red during fruiting. **Seed:** obovoid heart-shaped,  $3.5-4.5 \times 3.2-4$  mm, brown, flattened on 1 or 2 faces next to adjacent seeds, smooth. Mid-May–early July.

Naturalized. Woody climber escaped from cultivation and firmly established in several places close to roads (SMM), including Malibu Creek State Park, SMMNRA Peter Strauss, Griffith Park, and along Calleguas Creek. *Parthenocissus inserta* is also treated elsewhere as *P. vitacea* (Knerr) A. S. Hitchc. This plant has tendrils formed at most nodes (missing at every third node) and coarsely serrate, palmately compound leaves. Flowers of woodbine are nonshowy and lack nectar; they are produced at the beginning of summer so that mature fruits are present midsummer, before the plant goes dormant. In bud each anther is held within the pocket of the petal having a downward-oriented tip, but when the flower opens, the stamens is released and becomes erect while the petal spreads and later becomes recurved. Berries are eaten by birds, and this is likely the dispersal mechanism by which this climber has escaped cultivation, but this species remains extremely local and currently shows no signs of becoming an invasive.

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