

Torilis Adans. HEDGE PARSLEY, SOCK-DESTROYER

Torilis arvensis (Hudson) Link, SPREADING HEDGE PARSLEY, TALL SOCK-DESTROYER.

Annual, \pm rosetted, taprooted, 1-stemmed at base, with ascending branches mostly in canopy, erect, 13–100 cm tall; shoots with several basal leaves and mostly cauline leaves, short-strigose and strigose, the hairs white with clear, slightly swollen bases, nonaromatic. **Stems:** cylindric to inconspicuously ridged, to 4 mm diameter, tough, green-striped and yellowish-striped aging reddish and purple-striped, short-strigose with downward-pointing hairs. **Leaves:** helically alternate, 2–3-pinnately compound or dissected with opposite lateral primary leaflets (large leaves) and 3-foliolate with a longer terminal leaflet (upper cauline leaves), petiolate, without stipules; petiole channeled, 10–80 mm long, sheathing and closed around stem node, smooth on lower side, with membranous wings to 22 mm from base reaching to the lowest pair of primary lateral leaflets (upper cauline leaves); blade of lower leaves \pm ovate in outline, 50–140 mm long, rachis channeled like petiole, primary leaflets ovate in outline, secondary leaflets narrowly ovate to elliptic, 6–9 \times 2–5 mm, with unequal halves and a wider trailing edge, ultimate lobes acute, to 2 mm long, pinnately veined with midrib of each segment sunken on upper surface and raised on lower surface, strigose with upward-pointing hairs. **Inflorescence:** compound umbel, opposite and lateral a cauline leaf, with a relatively long peduncle and 2–3 umbellets, umbellet 4–5 mm across, 6–11-flowered, bracteate, short-strigose; peduncle cylindric, to 50 mm long, increasing to 200+ mm long and \gg leaf in fruit, tough; **involucre** absent; primary rays at first anthesis ascending, unequal, cylindric, 6–7 mm long increasing to $<$ 20 mm long in fruit; involucre of 5–6 ascending bractlets subtending outer pedicels, free, unequal, linear awl-shaped, 1–3 \times 0.2–0.4 mm long, membranous-winged to 1.5 mm, short-strigose; pedicel cylindric, at anthesis $<$ 1.5 mm long increasing to 4 mm in fruit, unequal in umbellet, short-strigose with hairs widely spaced on mature pedicel. **Flower:** bisexual, distinctly bilateral, 2 mm across; **sepals** 5, ascending, awl-shaped to acuminate-ovate, 0.4–0.9 mm long, green and short-strigose at base, colorless above midpoint and minutely papillate, sometimes purplish approaching tip, persistent; **petals** 5, ascending, distinctly unequal, in outline the outer, largest petal heart-shaped, 2 lateral petals unevenly heart-shaped, 2 inside petals the shortest and broadly obovate, 0.4–0.9 \times 0.5–1 mm within each flower, with incurved tip, either having purplish pink margins or solid white (solid purplish pink), the largest petal with green patch on lower surface, with midridge on upper (inner) surface, lower surface short-strigose; **stamens** 5, free, ascending; filaments 0.35–0.45 mm long, white; anthers dorsifixed, dithecal, \pm 0.25 mm long and wide, whitish or tinged purple, longitudinally dehiscent; pollen white; **pistil** 1; ovary inferior, with 2-domed, discoid, nectar-producing platform (stylopodium, stylar tissue) on top, \pm 10-ribbed but hidden by dense, ascending, short-barbed bristles on all sides or on outer side and inner half with stubby projections (tuberculate) where bristles would have formed, the bristles at anthesis to 0.9 mm long and translucent increasing somewhat and often purple (individuals with purple pigmentation in flowers) above midpoint in immature fruit, axis minutely toothed, barbs at tip 1–several, short and spreading, stylopodium \pm 1 mm long, slightly compressed side-to-side, pale green, with several short hairs next to styles, 2-chambered, each chamber with 1 ovule; styles 2, stubby, 0.15 mm long, colorless; stigmas terminal, minute. **Fruit:** schizocarp, of 2 dry, 1-seeded halves (mericarps), before splitting oblong-

ovate compressed side-to-side, 3–4 mm long, ribs either densely prickly on both halves or with tubercles on inner side, the bristles in vertical rows and mostly spreading, \pm 1 mm long, deep purple (= white petal form) or moderate purple (= purple petal form), with minute hooks on shaft and barbed at tip, having a dense row of white hairs along each groove of mericarp. Early May–late July.

Naturalized. Annual forming robust populations in numerous canyons of SMM, where spreading rapidly via their prickly fruits. *Torilis arvensis*, which was not reported in earlier manuals, in certain localities has white flowers and deep purple bristles on developing fruits (e.g., SMMNRA Solstice Canyon), but in other populations the flowers have purple pigmentation and fruit bristles have moderate purple pigmentation (Village of Topanga) and can be recognized as *Torilis arvensis* subsp. *purpurea* (Ten.) Hayek. This species, especially on robust plants, has flat-topped compound umbels produced on long, ascending peduncles, which are much longer than the associated cauline leaf, so that these plants have an open canopy with elevated inflorescences. The literature describes *T. arvensis* as having barbed bristles on both mericarps of a schizocarp, but that feature does not appear to be consistent in range, where one can observe that *purpurea* individuals produce schizocarps that are half-prickly, like those in *T. nodosa*, including in populations where the two species grow together. The two mericarp forms probably have different potentials for dispersal, but it has not been determined whether the two forms are equally viable, or whether there has been any interspecific hybridization where the two species now coexist, but that scenario seems unlikely without any confusing intermediates.

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