Pectocarya penicillata (Hooker & Arnott) A. DC., WINGED PECTOCARYA, NORTHERN PECTOCARYA. Annual, taprooted, not rosetted, several-many-stemmed at base, with principal shoots radiating to 18 cm, decumbent to ascending, 3–9 cm tall; shoots densely short-strigose with appressed white hairs pointed toward tip, the hairs mostly < 0.5 mm long. **Stems:** cylindric, < 1 mm diameter, green, flexible. **Leaves:** helically alternate (the first node of a basal shoot often opposite), simple, sessile, without stipules; blade linear, $5-25 \times 0.5$ mm, not sheathing stem, entire, acute at tip, only midrib evident and sunken slightly on upper surface. Inflorescence: leafy, spikelike cyme, with flower appearing opposite each leaflike bractlet, flower erect, widely spaced in fruit but not becoming nodding, conspicuously short-strigose; pedicel ascending, at anthesis 0.3–0.5 mm long increasing 2–3×, short-strigose. **Flower:** bisexual, radial, 1–1.4 mm across; sepals 5, unequal, lanceolate-ovate, $0.5-1 \times 0.3-0.5$ mm increasing to $2 \times$ in fruit, 2 ascending sepals slightly > 3 sepals, green, short-strigose, appressed to developing nutlets, persistent; **corolla** 5-lobed, short trumpet-shaped (short-salverform), 1–1.3 mm long, externally glabrous; tube + throat somewhat cylindric, \pm 0.4 mm wide, white at base and top and yellowish in mid-portion, near orifice with clear yellowish, club-shaped vesicles near sinuses, lacking appendages, with 5 small dimples opposite corolla lobes; lobes subequal, rounded, 0.3–0.4 mm long, white; **stamens** 5, fused to midpoint of corolla tube, included; filaments ca. 0.15 mm long, whitish; anther dorsifixed, dithecal, \pm 0.25 mm long, yellow, longitudinally and laterally dehiscent; pollen whitish; **nectary** beneath ovary, minute and cup-shaped, appearing not to produce nectar; **pistil** 1, included; ovary superior, deeply 4-lobed, \pm 0.2 mm long, green, glabrous, with developing edges, each lobe with 1 ovule; style attached to receptacle and arising from center of ovary lobes, ± 0.3 mm long; stigma capitate and inconspicuously notched. **Fruits:** nutlets, 4 (typically all maturing), widely spreading in X-shaped array to 4 mm long, each nutlet body \pm oblong (often appearing shallowly hourglass-shaped), $1.8-2 \times 0.9-1$ mm, short-strigose (with curved tips) on outer surface, with 20+ hooked and \pm translucent bristles at rounded tip, the lateral margins strongly upturned and typically without long bristles but with downward-pointing hairs, white becoming straw-colored; the longer sepals as long as nutlet body (excluding bristles). Late February-late May.

Native. A tiny spring annual to date only known from a disturbed sunny patch close to China Flats, but expected elsewhere. The tiny flowers are white and cannot be studied properly without good magnification. Mature fruits of *Pectocarya penicillata* are distinctive by having prominent, hooked teeth at the tip but absent on margins below midpoint, and the pedicels in fruit are ascending versus recurved in *P. linearis* subsp. *ferocula*.

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