Sonchus asper (L.) Hill (Asteraceae)
Prickly Sow Thistle, Spiny Milk Thistle

Description. Annual, sometimes biennial, 1-10(15) dm tall, erect, herbaceous, generally glabrous, from a stout taproot. Central stem somewhat succulent, stout, angled, glabrous, the lateral stems erect to ascending. Leaves alternate, 5-30 cm long, oblanceolate, auriculate, the auricles rounded, lower leaves slightly to deeply lobed, the deeper lobes ovate, spiny-toothed, the uppermost leaves ovate, often simple with spiny-toothed margins. Heads ligulate (all corollas bilateral and bisexual), 1.5-2.5 cm wide, hemispherical, stalked, solitary or in small corymbose terminal clusters of 2-7. Phyllaries in several unequal series, oblong to lanceolate, becoming thick with age, the outer ones shorter than the inner. Flowers bisexual, corollas ligulate, yellow, the ligules shorter than the tube. Achenes 2-3 mm long, ellipsoid to obovoid, compressed, usually 3-4-ribbed, usually smooth, the margins wing-like; pappus 6-9 mm long, soft, capillary, falling in a ring. Flowering in California from March to September (Barkley 1986, Boulos 1976, Clapham et al. 1962, Cronquist 1994, Ferris 1960, Gleason and Cronquist 1991, Munz 1959, Stebbins 1993).

The closely related species, *S. oleraceus* L. (common or annual sow thistle) differs primarily by having sharply acute leaf auricles, and achenes with 3-5 ribs that are evidently rugose. *Sonchus tenerrimus* L. has acute auricles, ligules much longer than the corolla tube, and the somewhat terete, transversely rugose achenes have 1-3 ribs. Both species have unwinged achenes.

Geographic distribution. Natives of northern Europe, western Asia, and northern Africa, both *Sonchus asper* and *S. oleraceus* are introduced and widespread throughout temperate regions of all 6 arable continents, Hawaii, and New Zealand (Arnold and De Wet 1993, Boulos 1976, Chapman 1991, Cronquist 1994, Wagner et al. 1990, Webb et al. 1988).

Both *Sonchus asper* and *S. oleraceus* were reported from California as early as 1865 by Brewer et al. (1876) and Bolander (1870), but *Sonchus asper* was probably in California prior to the 1770's (Hendry and Bellue 1925, Robbins 1940). Both species are present on all four northern Channel Islands; *Sonchus oleraceus* is also known from Santa Barbara Island (Junak et al. 1997). Both species have been reported from most California counties (Anonymous 1998, Stebbins 1993).

Reproductive and vegetative biology. We found no literature specific to the breeding system of *Sonchus asper* and near relatives. However, this species has bisexual flowers and presumably is pollinated by small insects, as are other members of the Lactuceae (Richards 1986, Proctor et al. 1996). Like other Asteraceae with a capillary pappus and small light seeds, *Sonchus* presumably has a relatively high level of dispersability (Anderson 1992, Sheldon and Burrows 1973). Seeds of *S. oleraceus* germinate readily under either light or dark conditions, generally at temperatures ranging from 7 degrees C to above 35 degrees C (Anderson 1968).

Ecological distribution. In both natural and naturalized geographic ranges, *Sonchus asper* and *S. oleraceus* occur on disturbed sites of waste areas, orchards, roadsides, open sites in grasslands, and abandoned fields (Boulos 1976, Chapman 1991, Cronquist 1994, Gleason and Cronquist

1991, Holm et al. 1977, Webb et al. 1988). *Sonchus asper* was a common invasive in Australian shrublands (Purdie 1977, Purdey and Slatyer 1976). Trabaud (1990) reported *Sonchus oleraceus* as a common invasive of burned shrubland in France.

Weed status. *Sonchus asper* is not considered a noxious weed in agricultural or horticultural practice, at least at a global level (not listed by Holm et al. 1977). However, *Sonchus oleraceus* is treated as a noxious weed by Holm et al. (1977). Both species are listed as weeds in the United States in Lorenzi and Jeffery (1987), but they are not considered noxious by the State Dept. of Food and Agriculture (Anonymous 1996).

Microbial and insect pathogens. Whiteflies (*Bemisia argentifolii*) have been reported to occur on *Sonchus oleraceus* (Summers et al. 1996). No other literature was found that reported *Sonchus asper* or *S. oleracea* as a host of detrimental fungal or insect pathogens.

Herbicide control. Lorenzi and Jeffery (1987) recommended the use of 2,4-D prior to bolting in grassland infestations. No other literature was found that reported herbicide treatment.

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