Malva parviflora L. (Malvaceae)
Cheeseweed, Little Mallow, Small-fruited Mallow

Description. Annual, from a deep taproot, glabrous or sparsely pubescent with stellate hairs; stems 1-10 dm tall, prostrate to ascending, simple or branched. Leaves alternate, stipulate, the stipules linear to narrowly triangular, the blades 2- 10 cm long, 2-9 cm wide, round to reniform, with 5 or 7 lobes, margins crenate to dentate, bases cordate to subcordate, apices rounded. Flowers 2-4, in axillary clusters, peduncles 2-15 mm long, calyx subtended by an involucel of 3 linear bracts that are 1-2 mm long; calyx lobes 5, 3-4 mm long, broadly ovate, spreading in fruit, apices mucronate; corolla of 5 lobes, 4-6 mm long, pink to white, glabrous; stamens many, fused into a tube surrounding the style; ovary superior, fruit circular, the central portion depressed, separating into rugose to reticulate segments at maturity, the margins of the segments slightly winged. In California, flowering from March to September (Dalby 1968, Fernald 1950, Gleason and Cronquist 1991, Hill 1993, Thompson and Barker 1986).

The related *Malva nicaensis* (bull mallow) is characterized by having sepals curved over the fruit, darker colored petals (pink to violet) 8-15 mm long, with ciliate claws, and fruit segments that are angled but unwinged (Dalby 1964; Hill 1993). The closest relative of *Malva nicaensis* All appears to be *Lavatera cretica* L. rather than other species of *Malva* (in the strict sense according to Ray 1995, 1998).

Geographic distribution. A native of Europe, *Malva parviflora* is widely naturalized in North America, Australia, New Zealand, southern Africa, and Hawaii (Arnold and de Wet 1993, Chapman 1991, Gleason and Cronquist 1991, Hill 1993, Mitich 1990, Wagner et al. 1990, Webb et al. 1988). In addition to the above regions, *Malva nicaensis* has also become naturalized in Chile (Montenegro et al. 1991).

By the late 19th century *Malva parviflora* had become recognized as a weed throughout coastal California (Hilgard 1890), although it probably was established near early Spanish setlements during the late 18th century (Hendry and Bellue 1925).

Malva parviflora is reported from all California Channel Islands, but *M. nicaensis* is known only from Santa Cruz Island (Junak et al. 1993. 1997). Although *M. parviflora* appears distributed throughout California, *M. nicaeensis* has been reported only from most coastal counties and the San Joaquin Valley (Anonymous 1998; Munz 1959).

Reproductive and vegetative biology. No literature pertinent to the reproductive and vegetative biology of *Malva parviflora*, *M. nicaensis*, and related species was found. Like other weedy Malvaceae, these species presumably are self-compatible, partly self-pollinating, and visited by small bees and flies (Faegri and van der Pijl 1979).

Ecological distribution. Cheeseweed and related species occur in waste places, cultivated fields, disturbed sites, rocky slopes, and grasslands (Fernald 1950, Gleason and Cronquist 1991, Hill 1993, Mitich 1990, Munz 1959, Thompson and Barker 1986).

Weed status. *Malva parviflora* is not considered a noxious weed in agricultural or horticultural practice, at least at a global level (not listed by Holm et al. 1977), nor is it

considered a noxious weed by the State Dept. of Food and Agriculture (Anonymous 1996). Only *Malva neglecta* Wallr. (common mallow) is listed for the United States in Lorenzi and Jeffery (1987).

Microbial pathogens. Potato Y potyvirus has been reported in *Malva parviflora* (Espino De Paz et al. 1997). Although cheeseweed is susceptible to tomato spotted wilt tospovirus, it is apparently resistant to the primary vector, a thrip (Bautista et al. 1995). A fungus (*Colletotrichum gloeosporioides* f. sp. *malvae*) has been reported to be especially pathogenic to populations of *Malva parviflora* (Morin et al. 1996).

Insect pathogens. *Malva parviflora* has been reported as a host of the true bug, *Bemisia argentifolii* (Summers1997), thrips (Yudin et al. 1988), and the tipworm, *Crocidosema plebejana* (Hamilton and Zalucki 1993a, 1993b). *Malva nicaeensis* has been reported as a host of the cerambycid beetle, *Plagionotus scalaris* (Lopez-Colon 1994).

Herbicide control. Wells and Appleby (1992) studied physiological effects of glyphosate on *Malva parviflora*. No other literature on herbicide control of either *M. parviflora* or *M. nicaensis* was found. However, Lorenzi and Jeffery (1987) recommended the use of atrazine, bromacil, 2,4-D, dicamba, and tebuthiuron for control of *M. neglecta*.

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