

# *IPOMOEA AQUATICA* FORSSKAL

Convolvulaceae/Morning-Glory Family

**Common Names:** Water-spinach, Chinese water-spinach or morning-glory, water bindweed

**Synonymy:** *Ipomoea repens* Roth, *I. reptans* Poirlet, *Convolvulus repens* Vahl

**Origin:** Central to south China

**Botanical Description:** Herbaceous trailing vine with milky sap. Stems hollow, to 3 m (9 ft) long or more, rooting at nodes, floating in aquatic situations. Leaves alternate, simple, with glabrous petioles 3-14 cm (1-6 in) long; leaf blades generally arrowhead shaped but variable, glabrous or rarely pilose, to 17 cm (7 in) long, with tips pointed; blades held above water when stems floating. Flowers showy, funnellform like morning-glory blooms, solitary or in few-flowered clusters at leaf axils; petals white or pink-lilac. Fruit an oval or spherical capsule, woody at maturity, about 1 cm (1/2 in) wide, holding 1-4 grayish seeds, these often short-hairy.

**NOTE:** Two basic forms (with many cultivars of each) recognized worldwide for this species: “red,” with red-purple tinged stems and pale pink to lilac flowers; and “green,” with fully green stems and white flowers—all “races” observed in Florida exhibiting the same growth habit.

**Ecological Significance:** Introduced repeatedly to Florida waters since 1979, despite its state and federal listing as a prohibited plant and noxious weed (R. Kipker, Florida Department of Environmental Protection, unpublished data). Popular among some recent immigrants as a common potherb from the homeland (T. Q. Ngo, Vietnamese Community of Florida, Pinellas Park, 1995 personal communication), and has been studied in Florida as a vegetable crop (e.g., Bruemmer and Roe 1979, Snyder *et al.* 1981). Recognized early as a threat to natural areas in Florida (Ochse 1951, Gilbert 1984). Has been found naturalized in Florida primarily in canals and ditches, but also invading shallows of more than a dozen natural lakes (R. Kipker, Florida Department of Environmental Protection, unpublished data). Forms dense floating mats of intertwined stems over water surfaces, shading out native submersed plants and competing with native emergents (K. C. Burks, Florida Department of Environmental Protection, personal observations). Under good conditions, can produce 190,000 kg fresh weight biomass per ha (84 tons per acre) in 9 months (Massal and Barrau 1956). Considered the second greatest problem plant in the Philippines, where it tends to overgrow freshwater marginal areas (Gangstadt 1976). A common to serious weed, or present as a weed in many areas of the tropics (Holm *et al.* 1979).

**Distribution:** Native to China, but widely cultivated and naturalized in Asia, Africa, Australia, Pacific Islands, and South America (Staples 1996). In Florida, naturalized populations found in scattered locations from Bay County in the Panhandle to Dade County in south Florida, with eradication attempts always made but not always successful (R. Kipker, Florida Department of Environmental Protection, 1997 personal communication). Herbarium specimens documented so far only from the Tampa Bay area (Wunderlin *et al.* 1995), where it may now be found cultivated under specially permitted quarantine conditions for out-of-state sale.

**Life History:** May root at every node, producing new plants when segmented (Edie and Ho 1969). Grows well in moist soil or in still to flowing waters (Payne 1956). Flowers in warm months (Dressler *et al.* 1987). Produces 175-245 seeds per plant during peak season (Patnaik 1976).



**Flowers**



**Covering pond, Brevard County**