

A new invader

South American spongeplant: worse than water hyacinth?



Above: The first California infestation, found in a 5-acre Redding pond in 2003, seen here before treatment. The spongeplant choked out the parrotfeather and most of the water primrose that was in the pond. In the middle distance, some remaining primrose is barely visible, and beyond that, grass is starting to grow on the spongeplant mat. Right: a close-up of the infestation. The white square is 0.5m (20 inches) on a side.

It chokes out everything



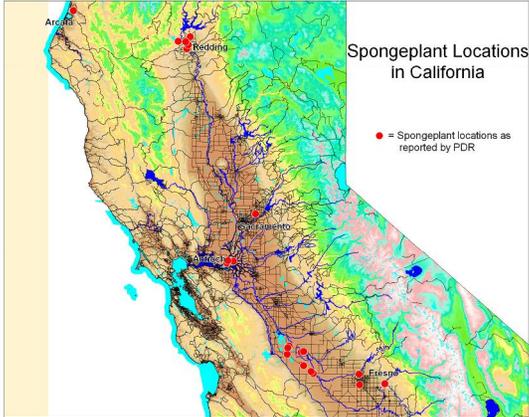
Many seeds: small seedlings move easily

Right: spongeplant mixed in with duckweed and watermeal. The red ellipses circle spongeplant seedlings.

Water hyacinth reproduces from seed very rarely, but spongeplant produces many seeds and seedlings. Our observations indicate that it flowers heavily as the weather warms in May and June, but flowers can be found throughout the growing season. Mature seeds are about the size of peppercorns. We found no information in the scientific literature on how long seeds survive, but our experience suggests it is at least three years. If we begin treating an infestation that has existed for several years and has had time to set seed, we still find new seedlings even after three years of treating. During that time, we allow few if any plants to set seed.



It's really starting to spread



Above: Official state records of spongeplant locations in California. The first records of spongeplant were in 2003, in Arcata and Redding. No more spongeplant appeared until the summer of 2007, when plants were reported in the San Joaquin River in Fresno. In late December, 2007, it was found a few miles from Antioch in a patch at the western edge of the Delta. That patch seemed to disappear after a major winter storm occurred a few days after the report. In winter of 2008, plants were found in a canal system off the Kings River east of Fresno. In summer, 2008, it appeared in canals in western Fresno County between Mendota and Dos Palos. In 2009 and 2010, it was again found in the Delta. The Sacramento city location was in a small drain and has been eradicated.



Above, top: Spongeplant in a canal in western Fresno County, near South Dos Palos. Above, bottom: the same canal two weeks later, after treatment. Although spongeplant spreads easily, it is relatively easy to control by mechanical removal or herbicides, at least in situations where it hasn't developed a seed bank.

Learn to spot it!

Right: spongeplant has a distinctive leaf profile in plants that grow in uncrowded conditions. When uncrowded, spongeplant leaves lie flat on the water (right, below) and have a strongly keeled profile (right). The lower surface of the leaf has a large number of air-filled chambers (aerenchyma) that help it float. In crowded conditions (photos left and above), the leaves turn upright, the leaf stems elongate, and the leaves thin and expand. In crowded conditions, spongeplant is easily mistaken for water hyacinth.

The long pale filaments of the star-shaped female flower are easy to see in these photos. Male and female flowers occur on the same plant, but male flowers do not stand out and are hard to find.



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