

**CERATOPHYLLACEAE HORNWORT, COONTAIL FAMILY**

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Perennial herbs, free-floating submerged, rootless; monoecious. STEMS flexuous or brittle with irregular branching. LEAVES whorled, simple, linear or dichotomously divided into linear filiform segments, with 2 sub-marginal rows of persistent spine-like denticles; segment apices tipped by multicellular appendages. INFLORESCENCES sessile or subsessile solitary flowers at nodes, subtended by a whorl of connate foliaceous bracts. FLOWERS hypogynous, greatly reduced; pedicels less than 1 mm long; perianth absent. STAMINATE FLOWERS with 3-many subsessile stamens. PISTILLATE FLOWERS 1-carpelled; style terminal, persistent, elongate-spinescent or short subulate, the apex acute. FRUIT an achene.  $2n = 24$ . --A monogeneric family; 6 spp., worldwide, mostly temperate.

***Ceratophyllum* L. Hornwort, Coontail**

Characters of the family. --(Greek: *keras* = horn + *phyllon* = leaf, forked leaves resembling antlers). Les, D. H. 1988. Syst. Bot. 13:73-86; 509-518; 1989. 14:254-262.

***Ceratophyllum demersum* L.** (growing under water). Common Hornwort. --STEM tips often with shortened internodes causing dense apical clustering of leaf whorls, these 15-60 mm in diameter when mature. LEAVES deep green, simple, or dichotomously divided, forked once, twice, or rarely three times, into 2-4(-6) ultimate segments, that are not inflated; denticles strongly exerted, coarse-textured. FRUIT moderately compressed, the body 3.5-6.0 mm long, 2.0-4.0 mm wide, 1.0-2.5 mm thick, dark green or reddish-brown at maturity, the surface smooth to tuberculate, the faces spineless; terminal stylar spine straight, 0.5-14.0 mm long, persistent; basal spines 2, straight or curved, 0.5-12 mm long, their bases occasionally inconspicuously webbed.  $2n = 24, 38, 40, 48$ . --Ponds, lakes, slow-moving streams, and river backwaters: Apache, Cochise, Coconino, (expected in La Paz), Maricopa, Mohave, Navajo, Pima, Santa Cruz, Yavapai, Yuma cos.; 50-2750 m (100-9000 ft); fl Apr-Sep (fr Jun-Oct); worldwide. Only species of the genus with a strictly three-spined fruit. Considerable interpopulational variation, especially with regard to the lengths of the fruit spines. Fruits and foliage important to fish and waterfowl; also used as aquarium plants.