

Najadaceae

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Najadaceae Juss., Gen. Pl.: 18 (1789), nom. cons.

Monoecious or rarely dioecious, annual or rarely perennial, erect, caulescent, glabrous *herbs* of fresh or brackish waters, growing entirely submersed. Roots fibrous, few, nonseptate, at base of stem and lower nodes. Stems slender, much branched, sometimes armed with spinulose teeth on the internodes; turions and tubers never developed. *Leaves* spiral, subopposite or pseudover-ticillate, sessile, with sheathing base; blade linear, flattened, 1-veined, sometimes abaxially toothed on midrib, the margins serrulate to dentate, the apex acute to acuminate, with 1-3 teeth per side; the teeth multicellular, formed by layers of cells decreasing in cell number distally and terminated by a large, sharp-tipped cell, or unicellular; sheaths variously shaped, each enclosing a pair of tiny intravaginal squamules, the margins usually spiny-toothed, with 1-15 teeth per side. *Flowers* axillary, solitary, or clustered, imperfect, perianth absent. Staminate flowers mostly subtended by 1 or 2 clear to pale purple, membranous, spathe-like envelopes, each flower consisting of a single stamen; pedicels at first short, elongating at anthesis, pushing the anther through the outer envelope; anther sessile, 1- or 4-sporangiate, dehiscent by an apical slit. Carpellate flowers sessile; a clear to pale purple membranous envelope rarely present; gynoecium ending in a short style with 3 or 4 branches; ovary 1-loculed; wall delicate, 2 cell layers thick; placentation basal; ovule solitary, bitegmic, anatropous. *Fruit* achenelike; gynoecial wall closely enveloping the seed, opening by decay. Seed fusiform to elliptic; testa areolate; embryo elongate, macropodous, straight or rarely curved; endosperm developing nuclear, absent in the mature seed.

A monogeneric, nearly cosmopolitan family with ca. 40 species.

VEGETATIVE MORPHOLOGY. The Najadaceae are all aquatic herbs which grow entirely submersed in fresh or brackish waters (Fig. 79). The roots arise from the base of the stem or along the lower

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Flowering Plants
Monocotyledons

Alismatanae and Commelinanae
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