

# *Pennisetum purpureum* Schumach.



**Common Name:** Napier grass, elephant grass, Merker grass

**Synonymy:** None

**Origin:** Africa

**Botanical Description:** Robust perennial to 4 m (13 ft) tall, forming thick clumps or colonies from basal offshoots or short rhizomes. Stems often branched above; internodes more or less bluish glaucous; young nodes with white hairs, later becoming smooth, glabrous. Leaf sheaths glabrous, usually shorter than the internodes; ligule a narrow rim densely fringed with long white hairs. Leaf blades linear to tapering, flat, often bluish green, to 1 m (39 in) long and 3 cm (1 in) wide, pilose near the base, especially on margins; blade margins generally rough; midvein stout, whitish above, strongly keeled below. Inflorescence a dense terminal panicle, spike-like, bristly, tawny to purple-tinged, to about 20 cm (8 in) long and 2 cm (0.8 in) across. Spikelets 4-6 mm long, solitary or in clusters of 2-6 on hairy axis, surrounded by sparsely plumose bristles to 2 cm long that fall with the spikelets at maturity; outermost glume minute or absent.

**NOTE:** May be confused with the larger native foxtails (*Setaria* spp., also called bristle grasses), but their spikelet bristles persistent on the flowering stalks, not falling with mature spikelets. Distinguished from other *Pennisetum* species in Florida by long leaf blades, sparsely plumose bristles, and minute or absent first glumes.

**Ecological Significance:** Reported as a weed in 19 crops in 25 countries, including the United States (Holm et al. 1977). In dense growth, prevents regeneration of native species (Cronk and Fuller 1995). Can dominate fire-adapted savanna communities (Holm et al. 1977). Introduced to the United States in 1913 as a forage crop (Thompson 1919, Hoover et al. 1948). Noted as escaping in 1968 (Ward 1968), and as established in glades in south Florida by 1971 (Long and Lakela 1971). Now commonly naturalized in central and south Florida, infrequently in north and west Florida, most often in disturbed areas such as roadsides, canal banks, and fields, but also

in scrub, pine rockland, hammock, sink, lake shore, swamp, and prairie habitats (Hall 1978). Reported in colonies on the shores of 11 public water bodies by 1992 (Schardt 1994). Has also created problems in flood-control systems by blocking access to canals, reducing water flows, and overgrowing pump stations (Schardt and Schmitz 1991). Still the subject of research for improved cultivars and hybrids as forage and silage in Florida and elsewhere (e.g., Diz et al. 1994, Philips et al. 1993, Spitaleri et al. 1994, Williams and Hanna 1995).

**Distribution:** Throughout the tropics and subtropics, Old and New World (Archer and Bunch 1953). In Florida, documented as invading sandhill, maritime hammocks, rockland hammocks, bottomland forests, marshes, lake shores, and ruderal communities. Documented by herbarium specimens from 32 counties as far west as Santa Rosa, Okaloosa, Walton, and Leon counties in the Panhandle to Duval on the east coast, south throughout the peninsula to Collier and Miami-Dade counties (Wunderlin and Hansen 2004). Has also been reported in natural areas from Marion County (FLEPPC 2005). Also naturalized and weedy in California, Hawaii, Puerto Rico, and the Virgin Islands (Holm et al. 1979, USDA 1997).

**Life History:** Grows well on a wide range of soils and in many habitats; very drought resistant; can form “reed jungles” in rich, moist soils (Holm et al. 1977). Forms dense clumps by extensive tillering; propagated vegetatively by root crown divisions or rhizome and stem fragments (Holm et al. 1977). Resprouts easily from small rhizomes left after mechanical control (Cunningham 1991). Able to persist in changing conditions from extensive, deep, fibrous root system, but can be injured by freezes (Holm et al. 1977). Flowers July through February. Does not readily produce viable seed in many countries, but good seed crops reported in El Salvador (Holm et al. 1977).