

Rhynchelytrum repens (Willd.) C.E.Hubb.



Common Name: Natal grass, rose natalgrass, Natal red top, ruby grass

Synonymy: *Melinis repens* (Willd.) Zizka, *Rhynchelytrum roseum* (Nees) Stapf & C. E. Hubb. ex Bews, *Tricholaena rosea* Nees

Origin: Africa

Botanical Description: Short-lived, perennial grass with glabrous, erect, slender stems (culms) to 1 m (3.2 ft) tall forming loose, open tufts. Leaves and stems pale green, often with purple blotches, and sometimes rooting from the lower nodes; nodes conspicuously pubescent. Leaf sheaths glabrous or sometimes with long, stiff hairs; leaf blades flat or folded, linear, to 30 cm (12 in) long and 1 cm (0.4 in) wide, often glaucous, upper surface slightly rough. Inflorescence a loose, open, terminal panicle, to 20 cm (8 in) long and 7 cm (2.7 in) wide, purple to pinkish, fading to silvery with age, fluffy, with slender, ascending branches. Spikelets on thin, flexuous stalks and covered with long, soft, wavy hairs, ovate, to 8 mm (0.3 in) long; glumes with short awns.

Ecological Significance: First introduced to Florida in Marion County around 1875 as a pasture grass (Austin 1978), but low palatability prevented success as a fodder species. Herbarium specimens document escaped populations as early as 1923 (FLAS). Now found in over 120 conservation areas throughout Florida across a variety of habitats, including beach dunes, coastal strands, mesic and scrubby flatwoods, pine rocklands, scrub, shell mounds, swamps, disturbed uplands, and hardwood hammock edges (Gann et al. 2001, FLEPPC 2002). One of the most frequently occurring exotic species in south Florida, it was found in over 49% of surveyed lands (Bradley and Gann 1999). Invades disturbed and natural habitats and can form dense monocultures in native vegetation (FLEPPC 2002). Found in dry, harsh environments such as beach dunes and endemic scrub communities of the Central Ridge (FLAS, FLEPPC 2002). Invades undisturbed steep slopes, and in Sonoran Desert grasslands, could “potentially fuel fires in vulnerable desert scrub vegetation” (van Deventer et al. 1997). Dominates native grassland communities

in Hawaii (Daehler and Carino 1998), where its substantial biomass creates a large fuel bed that may alter fire regimes (Smith and Tunison 1992). A major crop, pasture, and environmental weed in Brazil (Nobrega et al. 1997, Sa 1996), and throughout many South and Central American countries. A very efficient nitrogen-fixing species that can fix over 300 g N/ha/day (Lehane 1981).

Distribution: Herbarium specimens documented from 44 of Florida’s 67 counties (Wunderlin and Hansen 2002). Naturalized from California across the southern states to Louisiana, Georgia, North Carolina, north to Maryland, and in Hawaii, Puerto Rico, and the Virgin Islands (USDA NRCS 2002). An invasive weed in Australia, New Zealand, Southeast Asia, China, Philippines, Indonesia, throughout the Pacific and Indian Ocean Islands, Japan, the Mediterranean, and South and Central America (PIER 2002, MOBOT, RIB 2002). Recognized as a worldwide grass weed (USDA ARS 2002). Targeted for removal from commercial production by FNGA/TBWG growers associations (FNGA 2001).

Life History: Fast-growing pioneer species that colonizes degraded land and is resilient to harsh conditions (Palaniappan 1974, Sa 1996). Grows in a wide variety of habitats from swampy ditches and lake margins to dry prairies, mesic woodlands, and longleaf pine savannahs (Hall 1978). Perennial and hardy to -6.6°C (20°F), but survives as an annual in colder climates. Tolerant of many soils, including limestone, sand, nutrient-depleted soil, and soil contaminated with heavy metals (Carneiro et al. 2001, Munkert 2000, Ziegler et al. 2000). Grows in loose soil and crushed shell along roadsides (Landry 1996). Withstands moderate salinity (Onkware 2000). Grows well in arid or semiarid areas (HEAR 2002), but declined in abundance or was dominated by other invasive grasses in low moisture conditions in Hawaii (Daehler and Carino 1998). Resilient to strong winds and tolerates low annual rainfall and acute erosion (Ziegler et al. 2000). Reproduces quickly from wind-dispersed seed (PIER 2002).