Abstract

Oryza grandiglumis is a wild species of rice endemic to tropical America. This species was first found in 1998 in the wetlands of Caño Negro, located in the northern part of Costa Rica. Twenty five plants of O. grandiglumis were processed for scanning electron microscope. An ultrastructural description of the leaf blade, ligule, auricles, spikelet and caryopsis, with an emphasis on structures of taxonomic value. The leaf blade has a characteristic cuticular wax pattern, composed of dense rod-like structures, and is surrounded by papillae, zipper-like silica cells, abundant bulky prickle trichomes, and hooked trichomes. The blades edge has three rows of hooked prickle trichomes of various sizes. The auricles wrapped the culm, with long attenuated trichomes at the edges; the base was surrounded by oblong cells. The ligule is a blunt membrane covered by short prickle trichomes. Spikelet morphology is characteristic of the Poaceae family, but the sterile lemmas were nearly as long as the fertile lemmas, and they have an unique crown-like structure of lignified spines between the rachilla and the fertile lemmas. Comparison with Brazilian specimens of O. grandiglumis revealed little differences in the ultrastructural characteristics. Rev. Biol. Trop. 54(2): 377-385. Epub 2006 Jun 01

Keywords

Wild rice, Neotropical endemic, Oryza grandiglumis, Costa Rica, ultrastructure, morphology.